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ABSTRACT

The status of higher education in Texas is examined in this major report of changes in higher education over the past decade. Information on enrollment, cost, financial aid, job opportunities, and facilities in higher education institutions is given for private higher education, professional higher education, community colleges, and state colleges and universities. For the past decade Texas has been experiencing rapid growth and development of higher education institutions and ranks second in the nation for the number of students enrolled. The increasing costs of maintaining these institutions demand that financial support be increased substantially to maintain existent programs. Recommendations for state actions and policies on student assistance programs, public institutions, professional education, educational facilities, and funding for higher education are included. Twenty-one high priority items for consideration by the state coordinating board are also listed. Numerous tables and graphs provide statistical data. (BH)

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Texas Higher Education in Transition

Coordinating Board

Texas College and University System

October 1978

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**Coordinating Board, Texas College and University System
LBJ Building, P.O. Box 12788, Capitol Station
Telephone (512) 475-4361, Austin, Texas 78711**

Texas Higher Education in Transition

**Coordinating Board
Texas College and University System
October 1978**



Coordinating Board

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AUSTIN, TEXAS 78711

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The Honorable William P. Hobby
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The Honorable Bill Clayton
Speaker of the House

Gentlemen:

I am pleased to transmit on behalf of the Coordinating Board this updated report on the status of higher education in Texas as of 1978. It contains studies of data and information on changes which have occurred in higher education over the past decade. It is from our study of the accomplishments and activities of higher education during this period that we hazard some projections into the future. It is from the continuing association of this Board with the activities taking place within higher education that we present to you this report and a set of recommendations on higher education for consideration within state government for the next biennium.

Our colleges and universities have played a major role in the social, technological and economic advancement and well-being of the State of Texas. Their contributions will continue, and the effectiveness of their activities will be dependent upon the priorities established within state government and among the institutions for using the resources available to them. We hope this report and our recommendations will be helpful to you and your colleagues.

Yours truly,

Harry Provence
Harry Provence

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INTRODUCTION

Although third among all states in population and third in total appropriations to higher education, Texas ranks second in number of publicly supported colleges and second in number of students enrolled. The items below highlight some of the dramatic steps taken in the State of Texas over the past decade:

- Total enrollments have grown from 370,924 to 716,279, a 93 percent increase.
- 36 additional units of higher education have been created and funded by state government.
- Total state grants to students attending independent colleges and universities amounted to \$46,417,000, and loans to such students totaled \$43 million.
- State contracts with Baylor College of Medicine and the Baylor College of Dentistry have been funded by \$105,663,000.
- The total number of faculty members in public higher education has grown from 18,000 to 25,000.
- 959 new degree programs have been approved and established.
- Appropriations for all of higher education have climbed from \$676.3 million to \$2.89 billion, a 327 percent increase.
- Appropriations for medical, dental and health units since 1968 totaled \$1,857,019,336. During that period, total appropriations for medical and dental programs grew by 643 percent, from \$97 million in the 1968-69 biennium to \$720 million in the current biennium.

- Professional training markedly increased:

2,105 new dentists graduated,
 9,984 new nurses graduated,
 14,181 new lawyers graduated,
 113 new master's degrees were awarded,
 18 new PhD's and doctorates graduated,
 5,014 medical doctors graduated.

- Among the public senior colleges, utility costs have risen since the 1968-69 biennium from \$15.2 million to \$152 million, a ten-fold increase attributable in part to the addition of space and in part to the increasing energy costs.

- Bonded indebtedness climbed from \$606.5 million to \$1.55 billion.

Obviously, the State of Texas has responded significantly to the challenge of growth during that period of time. This was done through close cooperation among the governors, the Legislature, colleges and universities, and the Coordinating Board. Even in recent years, when other states have faltered in the funding of higher education, Texas has not done so. Funding has continued and has increased markedly with each succeeding biennium. The current biennial appropriation is 27 percent larger than the previous biennium, and this occurred at a time when many other states were making net reductions in the funding of their colleges and universities.

However, in the past few years these same parties which cooperated so effectively to respond to the needs for growth--the governors,

legislators, colleges and universities, and the Coordinating Board-- all have shown increasing concern that the rate of growth in higher education cannot or, indeed, should not be sustained. The Legislature has been reluctant to consider new institutions, passing resolutions on occasion stating legislative intent not to create additional institutions without prior consideration by the Coordinating Board. The governor has spoken out against continuing growth in higher education. There has been some decline among colleges and universities and among local communities to request new institutions of higher education. In the past year public universities have eliminated over 100 degree programs and deleted over 1,800 courses. They also have withdrawn 38 new degree proposals which were previously submitted, including four new PhD programs. And the Coordinating Board has taken an increasingly strong posture against the creation of additional units of higher education, the addition of administrative structures and the further addition of new degree programs and courses.

In studying the entire higher education situation, and in looking ahead as we must, the Coordinating Board finds that if high quality is to be sustained where it exists and achieved elsewhere in our colleges and universities, substantial support will have to be maintained and perhaps even increased for the colleges and universities already in operation. The number of new institutions authorized during the past decade now are reaching their planned levels of growth, and the large operating costs anticipated are indeed materializing and are even higher than originally projected. The substantial investment in new physical

plants now seems inexpensive in comparison with the continuing costs of operation. Consequently, the Coordinating Board has considered of major importance the need to examine adding new colleges and universities and programs.

The study has covered many aspects of higher education as set out in this report. The recommendations are based upon a restudy of the latest data on higher education in Texas. There are areas that need additional study, but this should not delay our transmitting information available on the other fields for possible use by the policy-makers in government in Texas.

A major study of this nature, cutting across all areas of higher education, is only possible due to the close cooperation of the Texas colleges and universities in routine reporting of data and in responding to special requests, sometimes on short notice. The Coordinating Board wishes to acknowledge and express its gratitude to the colleges and universities for their continuing contributions to the work of the Coordinating Board and its staff.

RECOMMENDATIONS AND PRIORITIES

The legislative mandate to the Coordinating Board emphasized the encouragement to excellence in higher education in the Texas college and university system. After 13 years of unprecedented growth of that system, made possible by the Legislature with the advice of the Coordinating Board and the fine cooperation by the college and university leadership, the Board presents this record of achievement by the institutions and the Legislature with the following recommendations to further the pursuit of excellence in behalf of the students of today and tomorrow.

I. RECOMMENDATIONS FOR STATE ACTIONS AND POLICIES

Student Assistance

1. That state support be continued for students attending private colleges and universities through the Tuition Equalization Grants Program in order to preserve the freedom of choice for students desiring private higher education and to contribute to sustaining a viable system of private institutions of higher learning.
2. That state law be amended to require foreign students to pay the same tuition paid by other non-resident students.
3. That state law be amended to allow persons classified as refugees by the U.S. Immigration and Naturalization Service to be classified for tuition purposes in the same way as aliens living in the United States under a permanent residence visa.

Public Senior Colleges and Universities

4. That no additional colleges or universities or centers or units of higher education be authorized by the Coordinating Board or established by the 66th or 67th Legislatures.
5. That no existing upper-level institution be authorized to convert to a four-year institution and that no combination of a community junior college with an upper-level institution, center, or branch to establish a four-year institution be authorized.

Professional Higher Education

6. That the state not establish a ninth medical school until the Legislature has fully funded the needs of existing medical schools and fully funded planned expansion of existing medical schools and until the need for additional medical doctors beyond projected manpower supplies has been documented by the Coordinating Board.
7. That if teaching hospital costs are to be funded by the state through supporting all residencies, special consideration be given to maintaining strong financial incentives to train medical doctors in family practice and the fields of primary care.
8. That no new law school be established in Texas at this time and that as student demands increase, the state thoroughly explore expansion in enrollments in existing schools and the possibilities of adding evening programs to existing schools before authorizing the establishment of an additional law school.

Educational Facilities

9. That no additional state funds be expended for the construction of permanent facilities for upper-level centers.
10. That the use of the constitutional ad valorem tax fund (Article 7, Section 17) and the Permanent University Fund (Article 7, Section 18) be broadened to include renovation, reconstruction and rehabilitation of educational and general physical facilities.
11. That greater equity be achieved in the distribution of constitutional ad valorem tax proceeds for construction of college facilities by placing more emphasis in the formula on the space available at institutions rather than on student enrollments.

Funding of Higher Education

12. That in making appropriations for higher education, first priority be given to the full funding of the Coordinating Board formula items as set out in the budget requests of the public senior colleges and universities and the community junior colleges.
13. That the salary of the Commissioner of Higher Education be removed as a line item in the Appropriations Act.

II. HIGH PRIORITY ITEMS FOR COORDINATING BOARD ATTENTION

Student Assistance

1. That the Board and the staff continue their diligent efforts to collect repayment on all student loans.

Community Junior Colleges

2. That in accordance with statutes and Board provisions and in response to the decline in entry-level qualifications among college students, the community college sector of higher education continue to bear primary responsibility for programs and courses to upgrade students for admission to degree-credit college courses and programs.
3. That in keeping with the position taken by the Board in the 1968 study and the 1975 restudy of higher education in Texas, new community college districts be encouraged in those areas of the state where need is documented, provided that statutory and Board requirements regarding the local fiscal base and projected enrollments are met.
4. That the Board recognize the expediency of authorizing out-of-district courses based on need and the requirement that high quality instruction be maintained in those areas of the state where enrollment projections and financial resources cannot support a separate community college district.
5. That vocational-technical education, when needed, be provided by the community college system and Texas State Technical Institute with exceptions to this policy granted by the Coordinating Board only after a determination that the nearby community college(s) and nearby branch of Texas State Technical Institute are unable or choose not to provide the needed programs.
6. That a study of state law concerning the expansion of community

college districts be undertaken in view of local financial difficulties associated with the fact that some community college districts include only a portion of the territory served by the college.

Public Senior Colleges and Universities

7. That Texas public colleges be encouraged to continue to evaluate new program needs in light of reassessment of institutional priorities, cost effectiveness of total academic program offerings, and possible need for internal reallocation of resources and reduction or consolidation of programs with low productivity.
8. That state level reviews of requests for new academic programs include considerations of overall institutional operating efficiency and cost effectiveness, statewide supply/demand, and impact on institutional resources.
9. That the Coordinating Board begin statewide reviews of existing programs, beginning with programs at the doctoral level, with all such reviews considering both qualitative and quantitative criteria, such as efficiency, quality, cost effectiveness, duplication, need, and productivity.
10. That universities with doctoral programs be encouraged to begin self studies of doctoral offerings with the goal of establishing priorities, reallocating resources and possibly reducing, consolidating, or restructuring doctoral programs.
11. That no additional master's level universities be authorized to expand graduate offerings to the doctoral level at this time.

12. That new doctoral programs be initiated only after careful consideration of academic demand, opportunities for non-academic employment, demand on institutional resources, possible duplication, and the institution's ability to meet and maintain quality criteria.

Private Higher Education

13. That the Coordinating Board continue to take into consideration the offerings and resources of private colleges and universities when evaluating new degree programs or administrative, academic or professional units in public institutions.
14. That the offerings and proximity of independent colleges and universities be considered in connection with the approval and disapproval of off-campus courses and degree programs.

Professional Higher Education

15. That the levels and specialization areas in allied health fields be studied in relation to technical training and skills and educational requirements for different fields.
16. That the staff continue to monitor nursing programs and study new proposals in terms of their cost, productivity, and adequacy in addressing health services needs.

Postsecondary Educational Supply and Occupational Demand

17. That the work by the State 1202 Commission, in cooperation with postsecondary educational institutions and state agencies, to provide information on the relation between the output of post-

secondary education in Texas and career opportunities in the job market be continued and strengthened.

Educational Facilities

18. That increasing attention be given to the utilization of existing space, the outstanding bonded indebtedness, and enrollment trends at each institution in considering all requests for new construction projects.

Funding of Higher Education

19. That the Coordinating Board staff conduct a special study of funding for public community colleges during the 1980-81 biennium.
20. That the Coordinating Board staff undertake a special study concerning energy conservation and energy audits related to the public institutions of higher education.
21. That the Coordinating Board staff work with the Governor's Budget Office and the Legislative Budget Board staffs to conduct a special study to develop guidelines for special items appropriation requests.

ADDENDUM ON ENROLLMENTS

As this report went to the printer early data on enrollments for fall 1978 became available. They bear out the trend started two years ago of slower growth. A summary of this data follows:

		<u>% Change Over 1977</u>
Public Total	<u>640,222</u>	1.13
Senior Colleges	328,690	1.60
Junior Colleges	311,532	.64
Private Total	<u>74,734</u>	- .61
Senior Colleges	72,463	-1.11
Junior Colleges	2,271	2.53
Texas State Technical Institute	<u>7,422</u>	-2.16
Health Units	<u>8,875</u>	1.58
Public	7,235	
Private	1,640	
GRAND TOTAL	<u>731,253</u>	.88

ENROLLMENTS

Enrollments projected for Texas higher education in the next decade contrasted sharply with the growth rate of the previous 10 years. From 1968 to 1977, statewide enrollment growth was more than 93 percent. For the period 1977 to 1987, enrollment in the state's postsecondary institutions is expected to increase by approximately 1.7 percent each year, for an overall gain of 16.9 percent.¹

The major portion of the 1977 to 1987 growth in student enrollment in Texas colleges and universities is projected to occur during the first five years. This expectation follows the general pattern of student enrollment projected for the nation as a whole. However, the rate of increase from 1977 to 1982 for Texas is expected to average about 2.5 percent each year, compared with only about 1.2 percent nationally. After 1982, national projections indicate a slight decline in enrollment², while in Texas there will continue to be a slight increase.

¹Details of enrollment projections for Texas are contained in CB Study Paper 27, Fall Headcount Enrollment Forecasts, Texas Postsecondary Educational Institutions, 1978-87, Coordinating Board, Texas College and University System, Austin, Texas, May 1978. Projections were based on historical enrollment trends from 1951 to 1976, college-going rates by age groups, geographic patterns of growth for students and county population projections by age groups. All forecasts were made on the basis of fall semester headcount enrollments.

²U.S. Department of Health, Education and Welfare, National Center for Educational Statistics. Projections of Educational Statistics to 1984-85, 1974, p. 21. Based on total degree and non-degree credit enrollments in all institutions.

Although Texas is expected to experience a population increase of approximately 1.2 percent annually during the next 10 years, a general statewide decrease is projected in two age groups, the 15-to-19 year-old and 20-to-24 year-old populations, as indicated in Table 1. The decline in the traditional college-going rates will be offset in part by college attendance of individuals older than 25. However, changing patterns of college participation by age groups will not be sufficiently large to compensate entirely for the smaller number of potential students of traditional college age.

Public-Independent Share of Enrollment

The share of the state's student body being served by independent institutions decreased from 19.5 percent in fall 1968 to 14.3 percent in fall 1973 to 10.6 percent in fall 1977. The number of students enrolled in independent colleges continues to increase, but at a much lower rate than enrollment at the public institutions. Independent junior college enrollment, which decreased sharply from 1968 to 1974, has demonstrated a leveling trend during the last four years. Independent senior college enrollment has increased since 1974, but at a slower rate than previous years.

The share of the student body to be served by Texas independent institutions to 1987, will be dependent in part on financial factors. Historical evidence indicates that Texas private colleges can continue to attract their proportionate share of college-bound men and women, but in order to do so the increasing cost differential between public and private education must be mitigated to some extent by public assistance

to students.

Assuming continued availability of adequate support, the number of students enrolling in independent institutions should continue to increase at a rate of 1.2 percent a year. Even with this projected increase, the proportion of students enrolled in independent institutions in 1987 would drop to about 10 percent of the student population, as indicated in Table 2.

Enrollments by Type Institution

From 1968 to 1973 there were noticeable shifts in the types of institutions students were electing to attend. The difference in the share between the public and independent sectors already has been noted but the major change between 1968 and 1973 involved the shift from public senior to public community colleges. This trend has continued, but to a slightly lesser degree, through 1977. (See Table 3).

For example, enrollments at public senior colleges in 1968 made up 56.7 percent of total state enrollments for that year. By 1973 their share had dropped to 48.9 percent, and in 1977 about 45 percent of all students enrolled in Texas were attending public senior colleges. On the other hand, enrollment in public junior colleges, accounting for just over 23 percent of the state's college students in 1968, rose to more than 35 percent in 1973 and reached about 43 percent in 1977.

Enrollment in public community colleges increased by almost 100,000 students between 1968 and 1973 and by more than 122,000 from 1973 to 1977. Their rapid enrollment growth undoubtedly has continued to affect enrollments in both public and private four-year institutions.

Enrollment at public four-year colleges increased by 47,864 between 1968 and 1973 and by an additional 63,426 from 1973 to 1977. The new upper-level institutions, some of which were not in full operation by fall 1973, have contributed to this higher enrollment level.

Enrollments in both the public senior and public community colleges are expected to continue to increase through 1987. However, the public community college enrollments are not expected to rise as dramatically as in the past. By 1987 the share to total enrollment for each type institution will be about 44.5 percent.

Enrollment by Level

Student enrollments in the Texas senior colleges and universities have been classified according to level as follows: lower division (freshmen and sophomores), upper division (juniors and seniors), master's and special professional and doctoral students. Historically, lower-division students have constituted slightly more than half the total enrollment in senior colleges and universities; upper division students, about one-third; and graduate students, the remainder. By 1973, however, a noticeable change had occurred in this traditional mix: the lower-division share had decreased to 44.7 percent, with the upper division and doctoral enrollment about constant and master's level showing a substantial gain. (As will be noted elsewhere, almost one-half the master's level enrollments are in teacher education.) This general pattern continued through 1977, and to a lesser extent is expected to prevail through 1987. The number of students enrolled at the different levels of study in public senior institutions from 1968 to

1977 and projections of enrollments to 1987 are shown in Table 4 .

Factors contributing to the shift in the enrollment mix by level include the rapid growth of community colleges and the addition of upper-level institutions to the system. Another factor affecting this mix is the changing pattern of enrollment by age groups. As shown in Table 5 . the 18-to-21 year-old group now makes up a smaller percentage of the total enrollment than in 1968, and older students are making up an increasingly larger share.

Resident and Non-Resident Enrollments

The distribution of resident and non-resident students at each type of institution for 1968, 1973 and 1977 is shown in Table 6 .

TABLE 1

TEXAS POPULATION BY AGE GROUPS
AND TOTAL HEADCOUNT ENROLLMENT

Year (Estimated)	Population by Age Groups ^a				Total 15 and above	Fall Headcount ^b Enrollment (Actual)
	15-19	20-24	25-29	30 and above		
1968	993,399	841,588	671,635	4,520,630	7,027,252	370,924
1969	1,021,910	875,410	705,164	4,989,429	7,591,913	405,902
1970	1,092,752	958,507	762,641	5,054,362	7,868,262	434,481
1971	1,128,553	1,020,408	788,197	5,149,830	8,086,988	475,184
1972	1,157,900	1,044,794	849,132	5,245,289	8,297,115	495,840
1973	1,180,420	1,067,884	897,779	5,331,789	8,477,872	525,546
1974	1,194,048	1,100,180	936,195	5,427,285	8,657,708	571,661
1975	1,219,014	1,124,332	993,727	5,535,145	8,872,218	666,571
1976	1,231,361	1,153,659	1,052,354	5,627,923	9,065,297	688,084
1977	1,239,596	1,183,558	1,075,287	5,768,431	9,266,872	716,279
Change 1968-77	+24.8%	+40.6%	+60.1%	+27.6%	+31.9%	+93.1%
(Projected)						
1978	1,242,478	1,208,590	1,101,796	5,920,515	9,473,379	741,696
1979	1,242,164	1,223,811	1,135,816	6,071,258	9,673,049	778,099
1980	1,193,698	1,229,794	1,132,310	6,136,521	9,692,323	796,680
1981	1,133,661	1,219,392	1,134,527	6,127,710	9,615,290	801,232
1982	1,092,825	1,225,708	1,161,362	6,244,116	9,724,011	804,167
1983	1,054,041	1,224,132	1,181,446	6,369,883	9,829,502	814,464
1984	1,026,885	1,218,206	1,191,646	6,501,641	9,938,378	822,625
1985	1,028,134	1,178,574	1,223,617	6,640,955	10,071,280	826,726
1986	1,051,028	1,140,762	1,238,318	6,782,280	10,212,388	831,449
1987	1,085,748	1,102,522	1,245,645	6,924,470	10,358,385	837,167
Change 1977-87	-12.4%	-6.8%	+15.8%	+20.0%	+11.8%	+16.9%

Note:

- a. Based on study by Southwest Econometrics, Inc.
Austin, Texas, January 1978.
- b. Includes independent and public junior and senior
colleges and technical institutes.
Does not include medical, dental, nursing, allied health,
graduate biomedical sciences or public health enrollment
in public or private health professional institutions.

TABLE 2
INDEPENDENT-PUBLIC SHARE OF
FALL SEMESTER HEADCOUNT ENROLLMENT

<u>Year</u> (Actual)	<u>Independent</u>	<u>Public</u>	<u>All Institutions^a</u>
1968	71,789	299,135	370,924
1969	72,800	333,102	405,902
1970	73,157	361,324	434,481
1971	74,519	400,665	475,184
1972	75,855	419,985	495,840
1973	74,758	450,788	525,546
1974	73,104	498,557	571,661
1975	74,764	591,807	666,571
1976	74,220	613,864	688,084
1977	75,632	640,647	716,279
Change 1968-77	+5.3%	+114.2%	+93.1%
(Projected)			
1978	77,521	664,175	741,696
1979	79,485	698,614	778,099
1980	81,662	715,018	796,680
1981	81,971	719,261	801,232
1982	82,272	721,895	804,167
1983	82,350	732,114	814,464
1984	82,552	740,073	822,625
1985	82,777	743,949	826,726
1986	83,006	748,443	831,449
1987	83,479	753,688	837,167
Change 1977-87	+10.4%	+17.6%	+16.9%

Note: a. Does not include medical, dental, nursing, allied health, graduate biomedical sciences or public health enrollment in public or private health professional institutions.

TABLE 3
FALL HEADCOUNT ENROLLMENT
TEXAS POSTSECONDARY EDUCATIONAL INSTITUTIONS

By Type of Institution

Year (Actual)	<u>Junior Colleges^a</u>		<u>Senior Colleges</u>		<u>Publ. Technical Institutions</u>	<u>Total Enrollment^b</u>
	<u>Inde.</u>	<u>Public</u>	<u>Inde.</u>	<u>Public</u>		
1968	9,728	86,913	62,061	212,222	N/A	370,924
1969	9,145	107,830	63,655	225,272	N/A	405,902
1970	6,907	123,127	66,250	238,197	N/A	434,481
1971	6,360	151,552	68,159	245,573	3,540	475,184
1972	5,342	166,168	70,513	249,441	4,376	495,840
1973	4,882	186,655	69,876	260,088	4,045	525,546
1974	2,291	214,125	70,813	278,966	5,466	571,661
1975	2,344	278,927	72,420	306,752	6,128	666,571
1976	2,441	291,556	71,779	315,437	6,871	688,084
1977	2,355	309,547	73,277	323,514	7,586	716,279
Change 1968-77	-75.8%	+256.2%	+18.1%	+52.4%	+114.3% ^c	+93.1%
(Projected)						
1978	2,296	323,397	75,225	332,964	7,814	741,696
1979	2,238	344,386	77,247	346,180	8,048	778,099
1980	2,183	355,500	79,479	351,229	8,289	796,680
1981	2,128	355,916	79,843	354,807	8,538	801,232
1982	2,075	354,967	80,197	358,134	8,794	804,167
1983	2,023	361,957	80,327	361,099	9,058	814,464
1984	1,972	366,723	80,580	364,020	9,330	822,625
1985	1,923	367,387	80,854	366,952	9,610	826,726
1986	1,875	368,467	81,131	370,078	9,898	831,449
1987	1,828	370,275	81,651	373,218	10,195	837,167
Change 1977-87	-22.4%	+19.6%	+11.4%	+15.4%	+34.4%	+16.9%

- Note:
- a. Junior college headcount enrollments include both semester length and less-than-semester courses.
 - b. Total enrollment projections do not include medical, dental, nursing, allied health, graduate biomedical sciences or public health enrollment in public or private health professional institutions.
 - c. Change for TSTI is from 1971 to 1977.

TABLE 4

FALL HEADCOUNT ENROLLMENT BY LEVEL
PUBLIC SENIOR ACADEMIC INSTITUTIONS^a

<u>Year</u> <u>(Actual)</u>	<u>Lower</u> <u>Division</u>	<u>Upper</u> <u>Division</u> ^b	<u>Master's and</u> <u>Special Professional</u> ^c	<u>Doctoral</u>	<u>Total</u>
1968	107,391	77,203	22,089	5,539	212,222
1969	112,357	82,851	24,162	5,902	225,272
1970	115,616	87,494	28,464	6,623	238,197
1971	118,529	90,138	30,235	6,671	245,573
1972	115,517	95,665	30,939	7,320	249,441
1973	116,306	97,175	38,883	7,724	260,088
1974	123,686	100,888	46,495	7,897	278,966
1975	133,051	110,639	54,555	8,507	306,752
1976	136,445	111,519	58,518	8,955	315,437
1977	138,831	115,477	60,027	9,179	323,514

(Projected)

1978	144,153	117,577	62,099	9,135	332,964
1979	149,696	122,331	64,700	9,453	346,180
1980	151,761	124,135	65,768	9,565	351,229
1981	152,901	125,575	66,716	9,615	354,807
1982	153,896	126,936	67,646	9,656	358,134
1983	154,891	128,110	68,389	9,709	361,099
1984	155,861	129,264	69,146	9,751	364,022
1985	156,820	130,454	69,884	9,793	366,951
1986	157,846	131,720	70,672	9,840	370,078
1987	158,892	133,060	71,397	9,869	373,218

a. Does not include enrollment at medical, dental and allied health institutions.

b. Includes students reported as "Unclassified," "Unknown."

c. Includes special and professional students.

TABLE 5
ENROLLMENT BY AGE GROUP
Texas Public Senior Colleges and Universities
1968, 1973 & 1977

<u>Fall Enrollment</u>	<u>Percent of Total Senior College Enrollment</u>				
	<u>Under 18</u>	<u>18-21</u>	<u>22-24</u>	<u>25-30</u>	<u>31 & Older</u>
1968	1.2%	59.2%	17.9%	11.7%	10.0%
1973	1.1%	51.7%	19.3%	16.2%	11.7%
1976	1.7%	48.4%	18.5%	17.7%	13.7%

TABLE 6

DISTRIBUTION OF RESIDENT AND NONRESIDENT STUDENTS
Texas Public and Private Junior and Senior Colleges and Universities
Fall Semester 1968, 1973 & 1977

<u>FALL 1968</u>			
<u>Type of Institution</u>	<u>Texas Resident</u>	<u>Out-of-State</u>	<u>Foreign</u>
Public Senior	92.2%	6.3%	1.5%
Public Junior	97.8%	1.9%	.36%
Private Senior	78.5%	19.5%	2.0%
Private Junior	71.5%	26.9%	1.6%
 <u>FALL 1973</u>			
Public Senior	91.9%	5.4%	2.7%
Public Junior	96.6%	2.4%	1.0%
Private Senior	76.9%	20.6%	2.5%
Private Junior	65.2%	31.9%	2.9%
 <u>FALL 1977</u>			
Public Senior	90.7%	5.3%	4.0%
Public Junior	95.2%	2.9%	1.9%
Private Senior	73.5%	23.1%	3.4%
Private Junior	59.9%	31.1%	9.0%

STUDENT COSTS AND STUDENT ASSISTANCE

Costs of attending Texas colleges and universities increased steadily during the past 10 years, during which time efforts were made by the state and federal governments to help Texas residents meet those rising expenses.

In 1965 the state created the Hinson-Hazlewood College Student Loan Program, which was followed in 1971 by the Tuition Equalization Grants Program and in 1975 by the Texas Public Educational Grants Program. In conjunction with those efforts, the state maintained a policy of low tuition and fees at all state-supported colleges and universities and created a series of statutory tuition and/or fee-exemption programs for certain students attending publicly supported schools.

These state programs, intended to insure Texas residents access to higher education, were supplemented by federal student aid programs. The resulting state-federal partnership greatly increased higher education opportunities for all Texas students. As college expenses continue to rise, this partnership will become increasingly important.

Information is provided in this section on the costs of attending Texas colleges and on the state and federal assistance available to residents. Projections of college costs through 1985 are also included, as well as the expected level of state and federal financial aid investments required for providing adequate assistance through that year.

Average Student Costs in Texas Colleges

Costs for a single resident student to attend a public four-year institution of higher education in Texas rose from \$1,972 to \$2,829 during the past five years. Average annual costs increased \$857, or 43 percent, largely because of rising costs of living. (See Table 7). At independent colleges, tuition rose substantially, while increased building use fees contributed to higher direct educational expenses for students in public senior institutions.

TABLE 7

TOTAL EDUCATIONAL COSTS IN AN ACADEMIC YEAR FOR A SINGLE STUDENT RESIDING IN A DORMITORY

<u>Type of Institution</u>	<u>Average Cost</u>		<u>Average Increase</u>	
	<u>1973-74</u>	<u>1977-78</u>	<u>Amount</u>	<u>Percent</u>
2-year public	\$1,727	\$2,380	\$ 653	38%
4-year public	1,972	2,829	857	43
2-year independent	2,352	3,443	1,091	46
4-year independent	3,075	4,286	1,211	39

The expense of attending college typically is defined as those costs incurred by a student pursuing at least a half-time course of study. Direct educational expenses include tuition, fees, books and supplies; living expenses cover room, board, transportation, laundry and personal expenses.

Average budgets for different types of students--single resident living in a college dormitory, single commuter living with parents or in off-campus housing, married resident and married commuter--are in-

cluded in Appendix I to this chapter.

The average expenses shown in Tables 7, 8, and 9 reflect those of a single student enrolled in a full-time program of study and living in a dormitory where meals are provided. Had the student been living at home, the budget would have been about \$525 less; had the student been married, about \$2,200 more.

TABLE 8

LIVING EXPENSES ONLY IN AN ACADEMIC YEAR FOR A
SINGLE STUDENT LIVING IN A DORMITORY

<u>Type of Institution</u>	<u>Average Cost</u>		<u>Average Increase</u>	
	<u>1973-74</u>	<u>1977-78</u>	<u>Amount</u>	<u>Percent</u>
2-year public	\$1,499	\$1,955	\$ 456	30%
4-year public	1,551	2,289	738	48
2-year independent	1,391	2,059	668	48
4-year independent	1,683	2,200	517	31

TABLE 9

DIRECT EDUCATIONAL EXPENSES IN AN ACADEMIC YEAR
FOR ALL STUDENTS

<u>Type of Institution</u>	<u>Average Cost</u>		<u>Average Increase</u>	
	<u>1973-74</u>	<u>1977-78</u>	<u>Amount</u>	<u>Percent</u>
2-year public	\$ 328	\$ 425	\$ 97	30%
4-year public	422	540	118	28
2-year independent	955	1,384	429	45
4-year independent	1,392	2,086	694	50

Tuition and Fees

Tuition for Texas residents is set by the Legislature at \$4 per semester credit hour (SCH) or a minimum of \$50 per semester. Tuition for out-of-state students and foreign students is \$40 per SCH, though some foreign students enroll at a tuition rate of \$14 per SCH based on reciprocity between Texas and their homelands. Concern has been expressed over the lower rates for foreign students than for out-of-state American students, and the reciprocity clause presently is open to discussion. Student service fees are set at a \$30 maximum per semester for all students.

Institutional governing boards determine building use fees and may pledge that income against bond issues for construction of academic facilities. Building use fees in 1977-78 ranged up to \$180 on some campuses, while several other institutions assessed no building fee. The highest fee in 1973-74 was \$162. Required fees at Texas public universities in 1977-78 ranged from \$136 to \$357. In other words, mandatory costs differed as much as \$221 among state public senior institutions. (See Appendix II). In 1973-74, fees varied from \$120 to \$322.

A comparison of fees at Texas institutions with those at institutions in other states is shown in Table 10 and reveals that charges at Texas colleges are among the lowest in the nation.

TABLE 10

RANGES OF REQUIRED TUITION AND FEES IN STATES
OTHER THAN TEXAS*

<u>Range</u>	<u>Resident Students</u>	
	<u>Number of Schools</u>	<u>Percent in Each Range</u>
Above--\$622	159	47.2%
\$523--\$622	51	15.2
\$423--\$522	45	13.4
\$223--\$422 ¹	63	18.8
\$123--\$222	18	5.4
Below--\$123	0	0.0
Total	<u>336</u>	<u>100.0%</u>

<u>Range</u>	<u>Non-Resident Students</u>	
	<u>Number of Schools</u>	<u>Percent in Each Range</u>
Above --\$1,482	165	48.8%
\$1,283--\$1,482	64	18.8
\$1,183--\$1,282 ¹	38	11.2
\$1,083--\$1,182	10	3.0
\$ 983--\$1,082	30	8.9
\$ 883--\$ 982	10	3.0
\$ 783--\$ 882	5	1.5
Below --\$ 783	<u>16</u>	<u>4.7</u>
Total	<u>338</u>	<u>100.0%</u>

¹Includes Texas Schools, 1977-78

*Source: American Association of State College and Universities,
"Annual Tuition and Fee, Room and Board, Charges Among
AASCU Member Institutions, 1977-78."

Numbers of Students Reached

In fall 1977 a total of 716,279 students enrolled in Texas public and private, junior and senior general academic institutions. There was over \$194.5 million available to assist those with financial need. Approximately 40 percent of all students enrolled in Texas colleges and universities receive some type of financial assistance.

The number of awards given to Texas residents through all of the state and federal programs (except the Federal Guaranteed Loan Program, where student data are unavailable) totaled 141,826 in 1973-74 and had increased to 292,570 in 1977-78.

In order to help students according to their individual financial needs, institutional financial aid officers "package" aid. The total amount of the "package" depends upon the extent of student need and resources available to the institution. The total package combines funds available through loan, grant, employment and scholarship programs.

Sources of Student Assistance Funds

Most of the funds available to assist needy students attending college in Texas come from two sources - the state and federal governments. Of the total financial aid funds available to Texas students in 1973, 28 percent came from the state, 72 percent from the federal government. By 1978, the ratio between state and federal student assistance funds had changed (primarily as a result of the Basic Educational Opportunity Grant Program) to approximately 83 percent federal funds and 17 percent state funds.

Average Cost of Attending College Projected to 1985

Projections of the costs of attending college in 1985 are based on the following assumptions: tuition and fees will remain at current levels; but books and supplies, living expenses, and all other costs of attending college will increase at an average annual rate of 10 percent a year.

At this rate of increase, the cost for a single, full-time student to attend a public four-year college in Texas will reach almost \$5,200 by the middle of the next decade. (See Table 11).

TABLE 11

PROJECTED TOTAL EDUCATIONAL EXPENSES IN AN ACADEMIC YEAR FOR A STUDENT RESIDING IN A DORMITORY

<u>Type of Institution</u>	<u>1977-78 Budget</u>	<u>Projected 1984-85 Budget</u>	<u>Average Increase</u>	
			<u>Amount</u>	<u>Percent</u>
2-year public	\$2,380	\$4,409	\$2,029	85%
4-year public	2,829	5,178	2,349	83
2-year independent	3,443	5,570	2,127	62
4-year independent	4,286	6,644	2,358	55

Student Financial Aid Requirements and Sources of Funds

Increased living costs, reduced family purchasing power and the rising costs of college attendance are resulting in a widening gap between student needs and available financial aid funds. Although aid sources available to Texas students have grown, at least part of that growth has been offset by cost-of-living increases.

Funds available to Texas students from both state and federal sources grew from \$114.2 million in FY 1974 to \$194.5 million in FY 1978 for an increase of over 29.8 percent. Table 12 shows state and federal contributions to financial aid programs.

TABLE 12
STUDENT FINANCIAL AID AVAILABLE TO TEXAS STUDENTS
FY 1974 AND 1978

<u>Source of Funds</u>	<u>Amount</u>		<u>Percent Increase</u>
	<u>FY 1974</u>	<u>FY 1978</u>	
Federal Government	\$82,598,513	\$161,005,890	48.7%
State Government	31,602,867	33,541,641	6.1%
TOTAL	\$114,201,380	\$194,547,531	

State Programs

State student assistance funds are now made available to Texas students through four avenues--the Hinson-Hazlewood College Student Loan Program, Tuition Equalization Grants Program, Texas Public Educational Grants Program and statutory programs exempting certain students from payment of tuition and fees. The level of state support for financially needy students increased from \$31.6 million in 1974 to \$33.5 million in 1978, as shown in Table 12. The largest portion of those funds was made available through the Hinson-Hazlewood loan program. The trend in recent years, however, has been toward a sub-

stitutions of grants for loans. Consequently, in 1978 the number of loans had dropped to 12,077 from 17,475 in 1974. During the same period, the number of gift aid recipients increased from 21,578 to over 37,038. (See Table 13).

TABLE 13
STATE STUDENT ASSISTANCE PROGRAMS
1974 and 1978

	1974		1978	
	<u>No. of Students</u>	<u>Amount</u>	<u>No. of Students</u>	<u>Amount</u>
Hinson-Hazlewood College Student Loan Program	17,475	\$20,414,627	12,077	\$13,344,222
Tuition Equalization Grants Program	6,555	3,000,000	19,900	10,460,610
Statutory Exemptions	32,209	5,434,273	40,819	6,500,360*
Tuition Revenue Scholarships	15,023	2,753,967	N/A	N/A
Texas Public Educational Grants Program	N/A	N/A	17,138	3,236,449**

*Academic Year
1976-77 data

**Academic Year
1976 data for senior institutions

**Academic Year
1975-76 data for junior institutions

The Hinson-Hazlewood College Student Loan Program makes loans available to qualified Texas students enrolled in all accredited public and independent institutions of higher education in Texas. Loans issued through this program

now are guaranteed for repayment through the Federal Insured Student Loan Program.

Statutory exemptions from payment of tuition and fees for certain categorical students are provided through 14 programs.

The Tuition Equalization Grants Program (TEG), administered by the Coordinating Board, assists needy students in paying the difference in the amount of tuition charged by a private college and a comparable public institution. Legislation limits grants to \$600 per student in any one fiscal year.

The Texas Public Educational Grants Program (TPEG) is funded by monies from tuition revenue set aside by institutions for scholarships to needy students. The fund is administered at the institutional level.

A portion of the funds available through the TEG and the TPEG Programs are used in matching federal funds obtained through the State Student Incentive Grants Program (SSIG). In these cases, students receive awards which are 50 percent federal (SSIG) funds and 50 percent state (TEG) or institutional (TPEG) funds.

The Texas Assistance Grants Program was created in 1975 but is as yet unfunded. Appropriation recommendations of \$3 million for the 1979-80 academic year and \$5 million for 1980-81 were made by the Coordinating Board for the upcoming legislative session.

Federal Programs

In 1973 one direct federal student assistance program and three "college-based" programs were available to Texas students. In 1974

two new federal programs were implemented: the Basic Educational Opportunity Grant Program (BEOG), which supplies aid directly to students to attend the institutions of their choice, and the State Student Incentive Grants Program (SSIG), which supplies matching funds for state or institutional grants. SSIG awards are administered at the state level by the Coordinating Board but are disbursed to individual students through the institutions.

Three college-based programs--National Direct Student Loan Program, the College Work Study Program and the Educational Opportunity Grant Program--have existed throughout the 1973-78 period.

Of the \$82.6 million federal funds expended in Texas in FY 74, \$44.7 million were disbursed through the Guaranteed Student Loan Program (GSLP) and \$37.9 million through the college-based programs.

GSLP data for FY 78 are not available, but funding of that program is estimated at \$35 million. The campus-based programs grew to \$43 million by 1978. An additional \$80 million came to Texas students in 1978 through the BEOG Program, \$3.3 million through the SSIG Program.

Student Financial Aid Requirements to 1985--General Statement

It is estimated that the amount of student assistance funds received by Texas students in 1985 may reach \$226.9 million, increasing 16.7 percent from 1978 levels. (See Table 14). On the assumption of maintenance of the current state-federal ratio, demands on state sources could reach \$38.6 million and from federal sources \$188.3 million. Projections of total funds yield a \$301.30 per student level of expected expenditure.

TABLE 14

PROJECTED TOTAL FUNDS AVAILABLE TO
TEXAS STUDENTS IN 1985
(MILLIONS OF DOLLARS)

State and Federal Sources

<u>Source of Funds</u>	<u>FY 1978</u>		<u>FY 1985</u>	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
State Funds	\$33.5	17%	\$38.6	17%
Federal Funds	<u>\$161.0</u>	<u>83</u>	<u>\$188.3</u>	<u>83</u>
Totals	<u>\$194.5</u>	<u>100%</u>	<u>\$226.9</u>	<u>100%</u>

The information provided for the federal government in the above chart is based primarily on their past performance. No specific data are available, and federal commitments through their several programs will depend on Congressional decisions during the next few years. Although specific dollar amounts are not available, the trend appears to be towards a continued effort to help financially needy students gain access to a college education.

State Program Requirements

While federal programs can only be estimated in a lump-sum manner, specific dollar amounts can be predicted for the state programs which are now in operation. (See Table 15).

The figures are based on the assumption that the state will continue to aid students at a per-student amount comparable to that of 1978. This will entail a commitment from the state of an additional \$5.1 million, primarily in the area of gift aid,

TABLE 15

1985 PROJECTED LEVEL OF FUNDING
STATE STUDENT ASSISTANCE PROGRAMS*
(MILLIONS OF DOLLARS)

<u>Program</u>	<u>FY 1978</u>	<u>FY 1985</u>	<u>Increase Amount</u>	<u>Percent</u>
Hinson-Hazlewood College Student Loan Program	\$13.3	\$13.9	\$0.6	4.5%
Tuition Equalization Grant Program	10.5	13.1	2.6	24.8
Statutory Exemptions	6.5	7.5	1.0	15.4
Texas Public Educational Grants Program	2.0	2.7	0.7	35.0
Texas Public Educational Grants Program-State Student Incentive Grants Program (State $\frac{1}{2}$ Only)	1.2	1.4	0.2	16.9
Totals	\$33.5	38.6	5.1	N/A

*In projections of state and federal funding levels, the value of the dollar has been held constant. Earlier estimates of costs, however, assumed a 10 percent per annum inflationary increase. In comparing the 55%-85% increase in costs to the 4.5%-35.0% increase in funding, the reader should adjust the purchasing power of the aid dollars downwards. The gap between aid available and costs continues to increase.

Hinson-Hazlewood College Student Loan Program

Approximately \$13.9 million is expected to be loaned to 12,500 students through the Hinson-Hazlewood College Loan Program in 1985. The original \$285 million bond authorization for the program is expected to be adequate to meet that demand. This is the result of several factors. First, the original bond authorization is sufficient to meet current loan demand. Second, the demand for loans is leveling off, assumedly as a result of the increased availability of grant funds. Third, increased collections activities are bringing in dollars which can in turn be loaned to other students.

At the time of the original bond authorization, the Hinson-Hazlewood Program was expected eventually to become a revolving fund in which cash flowing back into the program would be sufficient to meet funding requirements without the need for additional bond sales.

The staff has continued to monitor this aspect of the program and current data lends preliminary support to the adequacy of the \$285 million authorization. Of the original authorization, \$79.5 million remains. Based on the remaining bonds and long-range cash-flow projections, the original authorization appears, for now, to be sufficient. It appears possible that by 1985 the program will reach that revolving status. Several variables involved in this preliminary impression could change. The staff and Board will continue to study this situation, but for now it seems appropriate to recognize this possibility.

Since the inception of the loan program, the state has pledged general revenue funds to the repayment of bonds whenever it was necessary. That pledge has never been necessary. The state has not had to reimburse the fund for the repayment of any bonds. Also, since the program's inception, the state has pledged full funding of the administrative support for the program. As of Sept. 1, 1978, this, too, is no longer necessary. Administration of the program now is fully funded from the federal lenders allowance.

If the possibility of revolving status by 1985 becomes a reality, the Hinson-Hazlewood College Student Loan Program could be in a position to function without state assistance of any kind, with no need for additional bonding authority.

Loan demand has decreased primarily as a result of increased availability of other financial assistance. Loan collections have increased as a result of several new procedures, including:

- (1) Naming of an "agent for service of process" upon whom a citation can be served if the borrower cannot be located at the time litigation is begun.
- (2) Filing of more suits against Hinson-Hazlewood borrowers (6,000 in fiscal 1978, 20,000 total since 1974) through the cooperation of the Attorney General and his staff.
- (3) Reporting of credit records to retail merchant associations in several major Texas cities to stimulate payment when additional borrowing is desired.

- (4) Enforcement of state laws prohibiting warrants from being issued to state employees and other persons indebted to the state. Payroll checks and withdrawals from teacher and state employee retirement funds have been delayed pending repayment.
- (5) Limitation of loan funds made available to students at institutions with high default rates.

Though loan volumes are expected to level off, projections show that more than 200,000 students will have benefited from the Hinson-Hazlewood Program by 1985.

Other State Programs

To meet the needs of students eligible to participate in the TEG program and maintain an average award amount of \$575 would require approximately \$13.1 million in 1985, as indicated in Table 15. If student enrollments increase at the rate projected and the per student level of expenditure remains the same in the tuition revenue scholarship program (now replaced by the Texas Public Educational Grants Program) and the statutory exemption programs, a total of about \$10.2 million would be available to Texas students through the two programs. (See Table 15).

Projected Funding Needs

As noted in other sections of this report, there is a trend for greater numbers of students to enroll in college programs on a part-time basis, particularly in community colleges. Most of these part-time students are enrolled for less than one-half of the normal course

load, making them ineligible to receive student assistance under rules and regulations of existing programs.

Many of these students will require some financial assistance to meet educational costs. As both the numbers of these students and their level of need increase, modifications in statutory provisions of state and federal programs may be desirable so that these students can become eligible to participate in aid funds. Another alternative might be implementation of new programs designed to meet the special requirements of such part-time students.

Also, the eligibility of students from proprietary and other types of postsecondary institutions to participate in federal and state financial aid programs would place an increased demand on available funds. This increased demand, which would approximate \$10 million per year in state funds alone by 1985, would further diminish the funds available to meet all student needs.

APPENDIX I

AVERAGE STUDENT EXPENSE BUDGETS IN TEXAS COLLEGES 1974 and 1978

Type of Institution	Living Expenses				Direct Educational Expenses	Total Expenses			
	Single		Married			Single		Married	
	Resident	Commuter	Resident	Commuter		Resident	Commuter	Resident	Commuter
2-year public 4-year public 2-year independent 4-year independent	Academic Year 1973-74								
	\$1,499.00	\$1,361.00	\$2,649.00	\$2,706.00	\$ 328.00	\$1,727.00	\$1,689.00	\$2,977.00	\$3,034.00
	1,550.50	1,209.50	2,886.50	2,886.50	421.50	1,972.00	1,631.00	3,308.00	3,308.00
	1,397.00	1,608.00	2,991.00	2,470.00	955.00	2,352.00	2,563.00	2,046.00	3,425.00
	1,683.00	2,744.00	2,864.00	2,948.00	1,392.00	2,075.00	2,876.00	4,256.00	4,340.00
2-year public 4-year public 2-year independent 4-year independent	Academic Year 1977-78								
	\$1,955.00	\$1,701.00	N/A	\$4,231.00	\$ 425.00	\$2,380.00	\$2,126.00	N/A	\$4,656.00
	2,289.00	1,765.00	N/A	4,518.00	540.00	2,829.00	2,305.00	N/A	5,506.00
	2,059.00	1,660.00	N/A	3,769.00	1,384.00	3,443.00	3,044.00	N/A	5,153.00
	2,200.00	1,852.00	N/A	4,797.00	2,086.00	4,286.00	3,938.00	N/A	6,883.00

APPENDIX II

TUITION AND REQUIRED FEES CHARGED TO FULL-TIME STUDENTS Public Senior Colleges and Universities in Texas Nine Months, 1977-78

Institution	Tuition		Required Fees			Total Required Fees	
	Resident Students	Out-of- State Students	Student Service Fee	Building Use Fee**	Other	Resident Students	Out-of- State Students
Angelo State University	\$100.00	\$960.00	\$60.00	\$144.00	\$24.00	\$328.00	\$1,188.00
East Texas State University	100.00	960.00	60.00	96.00	80.00	336.00	1,196.00
East Texas State University Center at Texarkana	100.00	960.00	60.00	96.00	-0-	256.00	1,116.00
Lamar University	100.00	960.00	60.00	96.00	52.00	308.00	1,168.00
Lamar University at Orange	100.00	960.00	60.00	96.00	2.00	258.00	1,118.00
Lamar University at Port Arthur	100.00	960.00	60.00	96.00	2.00	258.00	1,118.00
Midwestern State University	100.00	960.00	60.00	132.00	7.00	299.00	1,159.00
North Texas State University	100.00	960.00	60.00	132.00	48.00	340.00	1,200.00
Pan American University	100.00	960.00	54.00	72.00	-0-	226.00	1,086.00
Pan American University at Brownsville ...	100.00	960.00	54.00	72.00	-0-	226.00	1,086.00
Sam Houston State University	100.00	960.00	60.00	96.00	20.00	276.00	1,136.00
Southwest Texas State University	100.00	960.00	60.00	144.00	36.00	340.00	1,200.00
Stephen F. Austin State University	100.00	960.00	60.00	100.00	30.00	290.00	1,150.00
Sul Ross State University	100.00	960.00	60.00	44.00	20.00	224.00	1,084.00
Uvalde Extension Center	100.00	960.00	60.00	44.00	-0-	204.00	1,064.00
Texas A & M University System							
Moody College	100.00*	960.00*	36.00	-0-	-0-	136.00	996.00
Prairie View A & M University	100.00	960.00	60.00	146.00	34.00	340.00	1,200.00
Tarleton State University	100.00	960.00	60.00	144.00	9.40	313.40	1,173.40
Texas A & M University	100.00	960.00	39.00	144.00	48.00	331.00	1,191.00
Texas Eastern University	100.00	960.00	45.00	144.00	-0-	289.00	1,149.00
Texas Southern University	100.00	960.00	60.00	152.00	30.00	342.00	1,202.00
Texas Tech University	100.00	960.00	52.00	132.00	41.00	325.00	1,185.00
Texas Woman's University	100.00	960.00	60.00	132.00	15.00	307.00	1,167.00

APPENDIX II (continued)

TUITION AND REQUIRED FEES CHARGED TO FULL-TIME STUDENTS
Public Senior Colleges and Universities in Texas
Nine Months, 1977-78

<u>Institution</u>	<u>Tuition</u>		<u>Required Fees</u>			<u>Total Required Fees</u>	
	<u>Resident Students</u>	<u>Out-of- State Students</u>	<u>Student Service Fee</u>	<u>Building Use Fee**</u>	<u>Other</u>	<u>Resident Students</u>	<u>Out-of- State Students</u>
The University of Texas System							
The University of Texas at Arlington ...	\$100.00	\$960.00	\$60.00	\$136.00	\$22.00	\$318.00	\$1,178.00
The University of Texas at Austin	100.00	960.00	55.68	172.00	30.00	357.68	1,217.68
The University of Texas at Dallas	100.00	960.00	60.00	144.00	30.00	334.00	1,194.00
The University of Texas at El Paso	100.00	960.00	60.00	144.00	-0-	304.00	1,164.00
The University of Texas of the Permian Basin	100.00	960.00	60.00	96.00	-0-	256.00	1,116.00
The University of Texas at San Antonio .	100.00	960.00	60.00	96.00	-0-	256.00	1,116.00
University of Houston System							
University of Houston Central Campus ...	100.00	960.00	60.00	180.00	12.00	352.00	1,212.00
University of Houston at Clear Lake City	100.00	960.00	60.00	180.00	8.00	348.00	1,208.00
University of Houston Downtown College .	100.00	960.00	60.00	180.00	8.00	348.00	1,208.00
University of Houston Center at Victoria	100.00	960.00	60.00	72.00	-0-	232.00	1,092.00
University System of South Texas							
Corpus Christi State University	100.00	960.00	60.00	144.00	-0-	304.00	1,164.00
Laredo State University	100.00	960.00	60.00	84.00	-0-	244.00	1,104.00
Texas A & I University	100.00	960.00	60.00	96.00	13.00	269.00	1,129.00
West Texas State University	100.00	960.00	60.00	100.00	19.00	279.00	1,139.00

SOURCE: Institutional data submitted to the Coordinating Board

12/27/77

- * Students of the Texas Maritime Academy, both resident and non-resident pay \$5.00 per hour and have a minimum of \$60.00 per semester or \$120.00 per nine months. All other fees are the same as other students of the Moody College.
- ** Building Use Fees over and above tuition dedicated to the retirement of indebtedness.

COMMUNITY JUNIOR COLLEGE DEVELOPMENT

In 1973 the Coordinating Board approved six requests to hold elections to create new junior college districts in various parts of Texas. Local voters defeated the proposed community junior college districts in four of the six locations. Austin voters created a community college to operate under the board of trustees of the Austin Independent School District. The college enrolled students for the first time in fall 1973. Midland voters approved a deannexation of Midland College from the Permian Junior College District, which had operated the college since 1969. Thus, a new district was created for Midland College.

In fall 1973 North Harris County College enrolled its first students in a Union Junior College District created by the voters in Aldine, Humble and Spring Independent School Districts in fiscal year 1973.

The Coordinating Board in spring 1973 designated the Anderson (County) College Center in Palestine as an extension of Henderson County Junior College, based upon the enactment of House Bill 78, 62nd Legislature, 4th Called Session, in 1972. These actions by the Legislature and the Coordinating Board reflected the trend of increasing emphasis upon postsecondary occupational education in the state. Later, however, in its study reported to the 64th Texas Legislature in January 1975, the Board determined existing institutions could meet the state's needs for both academic and vocational education. The report noted the availability of resources at community colleges,

through both their in- and out-of-district offerings, Texas State Technical Institute and senior colleges with limited special approval of less-than-baccalaureate programs. It also included a Coordinating Board recommendation that no additional state-funded occupational centers be authorized.

Since 1973, the Coordinating Board has received inquiries from many local civic groups about the creation of new community junior college districts. The staff has met with steering committees in several localities to assist community leaders in understanding the minimum criteria and procedures for creating new districts. To date, however, none of the local efforts has led to a petition to seek Board authorization for an election.

Although no new community junior college district has been created since 1973, seven new colleges or campuses of existing community college districts have been created and begun operation. (See Table 16). The North Campus of San Jacinto College opened in 1974 and the Northwest Campus of Tarrant County Junior College opened in 1975. In the Dallas County Community College District, Cedar Valley College and North Lake College opened in fall 1977. Brookhaven College opened in fall 1978. El Paso Community College District had been created without a local tax or bonding authority in 1969 and enrolled students for the first time in fall 1971. In 1975 the college was authorized to levy a tax and issue bonds for construction. Proceeds from those bonds enabled the district to establish in 1978 the Valle Verde and Trans-Mountain Campuses, in addition to the Rio Grande Campus which had begun

operation without benefit of bond funds. A new South Campus of San Jacinto College is expected to open in 1979.

The Coordinating Board continues to support the principle that local communities should establish public community junior colleges when need is demonstrated and when statutory and Board criteria are met. In keeping with its commitment to a system of community colleges supported by both local and state effort, the Board reaffirmed on Oct. 10, 1977, its "policy on supporting the creation of only those new junior colleges which are established by a vote of the people, governed by locally elected trustees and supported by local ad valorem taxes."

In a few localities, substantial urban growth has occurred in areas contiguous to community college districts. (See Table 17). Those nearby colleges now are providing educational services to large numbers of citizens from areas which do not contribute to the local tax support of the institutions. Because a community college derives its "local" support from property taxes levied within the boundaries of the district and because the boundaries are "fixed" when the college is created, some colleges have encountered difficulty in keeping their local income on a par with their rate of growth. State laws make it difficult for a community college district to expand its boundaries. In the near future the staff will study, in cooperation with the community colleges, proposals to permit a college district to derive local income equitably from the total area it serves.

Since publication of the Board's 1968 policy statement on the development of community colleges in Texas, it has become apparent that

some sections of the state desiring a community college do not meet the minimum criteria. Therefore, the Board has developed, under statutory authority, procedures for the annual approval of out-of-district courses and programs by which existing community colleges can provide access to academic and technical-vocational programs for citizens residing outside college districts. The number of out-of-district locations being served increased from 161 in 1973-74 to 300 in 1977-78. A marked reduction occurred in 1976-77 when Board rules led to the elimination of course offerings in locations where insufficient need was demonstrated. (See Table 18).

The Board also sought to balance its commitment to approve out-of-district programs in areas not meeting criteria for a community college district with the principle of local financial support. On April 2, 1978, it adopted branch campus rules requiring local support of any out-of-district operation reaching an enrollment of 1,500 headcount students in state-supported credit courses. As an alternative to supporting a branch campus, local citizens may elect to create their own college district or join an existing one.

Public community junior college enrollments have increased dramatically since 1968, well above the rate of increase among all institutions of higher education in Texas. Community college headcount was up 256 percent, from 86,913 in 1968 to 309,547 in 1977, as shown in the chapter on Enrollments. During that decade, community colleges also gained an ever-increasing share of the total enrollment in Texas, increasing from 23 percent in 1968 to 43 percent in 1977.

While enrollments for Texas higher education are expected to stabilize in the next 10 years, community colleges are projected to grow by 19.6 percent by 1987, an average growth rate of 1.9 percent annually. In contrast with the dramatic increases since 1968, community college growth for the next decade is projected to exceed by only 2.7 percent an overall increase of 16.9 percent forecast for postsecondary education.

The most significant trend in public community college programmingsince 1968 has been the increasing emphasis upon technical-vocational instruction. The change is evident in the distribution of graduates. Student interest and program emphasis in public community junior colleges clearly are toward preparation for employment in specific fields.

The awarding of non-degree diplomas and certificates in technical-vocational fields increased only slightly, from 27 percent in 1969 to 30 percent in 1977. But there was a substantial increase in the ratio of technical-vocational degrees to academic degrees during that period. Technical-vocational degrees increased from 12 percent to 36 per cent of total two-year degrees awarded, while academic degrees declined from 62 percent to 33 percent of total during the same period. (See Table 19).

Recognizing the increasing demand for occupational education, much of it at the associate degree level, the Board on Feb. 14, 1975, reaffirmed its philosophy that less-than-baccalaureate programs should be approved only for community colleges, unless exceptional circumstances

exist. The Board adopted a policy requiring evidence of cooperation between nearby junior colleges and universities seeking approval of such programs. The policy permits universities to expand into the less-than-baccalaureate realm only when need is demonstrated and when a community junior college cannot or chooses not to provide the service.

TABLE 16
PUBLIC COMMUNITY JUNIOR COLLEGES AND CAMPUSES
OPENED SINCE 1973

<u>Year Opened</u>	<u>College or Campus</u>	<u>Year District Established</u>
1973	Austin Community College	1972
1973	*Midland College	*1972
1973	North Harris County College	1972
	San Jacinto College District	1960
1974	North Campus	
	Tarrant County Junior College District	1965
1975	Northwest Campus	
	Dallas County Community College District	1965
1977	Cedar Valley College	
1977	North Lake College	
1978	Brookhaven College	
	El Paso Community College District	1969
1978	Trans-Mountain Campus	
1978	Valle Verde Campus	
	San Jacinto College District	1960
(1979)	South Campus (under construction)	

*Midland College first opened as a part of the Permian Junior College System. Voters approved deannexation and creation of a separate district in December 1972.

TABLE 17
COMPARISON OF OUT-OF-DISTRICT AND IN-DISTRICT STUDENT RESIDENCY
FOR SELECTED PUBLIC COMMUNITY JUNIOR COLLEGES
Fall 1977

	<u>Percent of Out-of-District Residencies</u>	<u>Percent of In-District Residencies</u>
College "A"	86%	14%
College "B"	85	15
College "C"	74	26
College "D"	72	28
College "E"	62	38

TABLE 18

LOWER DIVISION OUT-OF-DISTRICT AND OFF-CAMPUS
ACTIVITIES OF PUBLIC COLLEGES AND UNIVERSITIES
1973-74 to 1977-78

<u>Academic Year:</u>	<u>1973-74</u>	<u>1974-75</u>	<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>
<u>*Number of Locations:</u>	161	236	357	291**	300**

*Cumulative total; reflects annual additions and withdrawals.

**Includes locations approved for lower-division off-campus courses by public senior colleges and universities.

TABLE 19

DISTRIBUTION OF ASSOCIATE DEGREES, DIPLOMAS AND CERTIFICATES
BETWEEN ACADEMIC AND TECHNICAL-VOCATIONAL PROGRAMS
Public Community Junior Colleges
1968 - 1977

<u>Academic Year</u>	<u>Technical -Vocational Diplomas & Certificates</u>	<u>Technical-Vocational Degrees</u>	<u>Academic Degrees</u>
1968	N/A	N/A	N/A
1969	27%	12%	62%
1970	29	17	53
1971	23	20	57
1972	26	25	49
1973	33	25	41
1974	31	29	40
1975	30	34	36
1976	35	31	34
1977	30	36	33

Note: Annual percentages do not always total 100 because of rounding.

SENIOR COLLEGES AND UNIVERSITIES

By the mid-1970s it was apparent that the era of rapid enrollment growth in higher education was over. The flood of students into Texas colleges was slowing to a smaller but steady stream. During the period of rapid expansion, the state established 12 new units to its senior college system, all of which began operation between 1970 and 1975. Some 1,000 new degree and certificate programs were added to college offerings during the past 10 years.

By 1975 approximately 98.9 percent of all Texas citizens lived within 50 miles of some institution of higher learning. Only 1.3 percent of the state's population (approximately 141,000 out of 12,237,100) lived outside a 50-mile radius of some public institution. Of those, some 26,000 lived within a 50-mile radius of private institutions in Abilene or Brownwood.

Clearly the state could shift its priorities from providing access to higher education to providing the level of support necessary for the new institutions to develop and for existing institutions to maintain adequate, high quality programs and instruction.

State funds flowing to institutions are related to numbers of students, so leveling enrollment will affect appropriations. For colleges with static enrollments, addition of new programs to meet changing student needs clearly will need to be achieved more through substitution than addition, through reallocation of resources available. This would entail reassessment of institutional priorities and improvements in operational cost efficiencies.

Enrollment Growth and Program Development

Total enrollment in Texas public and private senior colleges grew from 274,283 in 1968 to 396,791 in 1977, a 45 percent increase. An 11 percent growth rate is expected in the next 10 years.

The number of students being served by senior colleges increased by 122,508 over the past 10 years as compared with an anticipated student increase of 46,680 over the next decade.

Public senior universities served 77 percent of those students in 1968, with enrollment in private institutions accounting for 23 percent. The private senior college share dropped to 18.5 percent in 1977 and is expected to decrease to 18.0 percent by 1987.

Public senior college enrollment increased by 111,292 students during the past 10 years, growing by 52 percent. From 1978 to 1987 enrollment in public senior colleges is projected to increase by 40,254 students at a growth rate of 12 percent.

Student enrollment in master's-level work at public colleges over the past 10 years increased by 172 percent, far more rapidly than the 38 percent increase at the baccalaureate level. Although the actual numbers of students continue to increase the growth rate in master's enrollment appears to have peaked in 1975, declining slightly since then.

Increase in Colleges

Some 72 senior institutions in Texas were offering baccalaureate and master's programs in fall 1977. Of this number 35 were public and 37 were private.

All 12 of the public senior college units which began operation between 1970 and 1975 offered baccalaureate work; 11 also offered master's-level work.

Six were statutory, degree-granting institutions, five of which were upper-level.¹ Five additional units were upper-level centers of existing universities.² The other new unit was the University of Houston-Downtown College, a baccalaureate-granting branch of the parent university.

The major expansion in Texas higher education institutions occurred in the creation of the 10 upper-level units. Their authorization came in response to the demand of community college graduates for opportunities to obtain additional education and earn baccalaureate and master's degrees. Analysis of the extent of this need resulted in authorization for two types of upper-level units: 1) statutory, degree-granting institutions and 2) centers of existing institutions.

The first type of institution was recommended for areas where increases in population and larger enrollments were expected. Centers were recommended for areas where demand was expected to be modest but where geographic isolation justified an effort to serve the smaller number of students.

¹University of Texas of the Permian Basin, University of Texas at Dallas, Corpus Christi State University, Texas Eastern University, University of Houston at Clear Lake City, University of Texas at San Antonio

²Laredo State University, East Texas State University Center at Texarkana, University of Houston at Victoria, University of Houston-Downtown College, Sul Ross University Uvalde Extension Center, Pan American University at Brownsville

Enrollment patterns over the past five years and projected growth are shown in Table 20.

Coordinating Board approval for the centers was contingent upon the parent institution continuing to deliver administrative services, upon Coordinating Board review of administrative arrangements, and upon course credit and degrees continuing to be offered through the parent institution. Authority for the center was subject to being phased out when enrollments no longer justified the operation.

Basic to this concept of low-cost delivery of education programs was the understanding that the state would not be asked to duplicate costly facilities, libraries, equipment, administrative staff and services, and full-time permanent faculty.

Since the centers began operating, however, there has been a trend for these units to strive for more independence: to expand course offerings, administrative structures and physical facilities, and to establish de facto conditions which move them closer toward free-standing university status.

Two have sought and received enabling legislation. Three now are funded as individually designated agencies. The other two receive funds appropriated as special non-transferable items within the appropriation of the parent institution.

Because all the centers can be discontinued if enrollment levels no longer justify their existence, funding and ownership of buildings should be a major consideration. Two of the centers in 1977 sought and received

state funds to construct buildings. Major investments in permanent facilities increase the trend toward autonomy and permanence and makes it more difficult for the state to exercise the option to close the center when a need can no longer continue.

The state has made a major educational commitment to develop and support the new statutory upper-level institutions and the four-year and graduate institution in San Antonio. Headcount enrollment has been increasing at all these institutions; however, the growth has not been as rapid as anticipated, and only those located in metropolitan areas are likely to experience substantial enrollment growth in the next decade.

The new Downtown College of University of Houston also is experiencing enrollment growth, and its need for state funds will continue to expand.

Off-Campus Instruction

In addition to the creation of new units of higher education, college courses also are being offered at places away from the campus.

In 1973 the Coordinating Board recognized the burgeoning off-campus instruction by public senior colleges and universities, most of it at the upper-division, senior and graduate levels. Much of the off-campus instruction was providing access to working adults who could not come to a campus. However, the Board also realized that much duplication and competition had developed among institutions.

A statewide advisory committee was appointed to develop policies and procedures to coordinate the off-campus instruction. Following the passage of enabling legislation by the 64th Legislature in 1975, the Board implemented rules for monitoring off-campus activities. The 1976-77

annual plans were the first to be submitted for approval after adoption of the rules. Some 4,164 upper-level and graduate courses received approval to be taught off campus. After a slight decline in 1977-78, 3,164 courses were authorized for 1978-79, a decrease of 24 percent from the 1976-77 total.

Policies and procedures since have been amended to assure that the quality of off-campus instruction is equivalent to on-campus instruction. The rules are working effectively to maintain necessary courses and in selection of appropriate institutions to offer instruction when need is shown. The reduction in off-campus courses represents elimination of duplication and termination of courses where insufficient need is shown.

The controlled availability of off-campus courses, especially in cooperative ventures between institutions, may help eliminate some motivation for the creation of new degree programs. Continuation of off-campus instruction, carefully controlled in annual planning, helps insure reasonable access to educational opportunities for many citizens, while reducing some of the pressures for new programs and institutions.

Program Availability and Productivity

Program offerings at Texas public senior colleges expanded rapidly during the past 10 years, with the addition of 487 baccalaureate and 376 master's degrees.

The rate of growth slowed considerably after the mid-1970s. The Coordinating Board in 1975 placed a temporary moratorium on approval of new degrees and coupled the lifting of that ban with new program review procedures.

From 1968 to 1975, the Coordinating Board approved an annual average of 85 baccalaureate degrees and 44 master's degrees. For the past two years that annual average dropped to 28 baccalaureate and 20 master's degrees.

The need for caution in expanding program offerings became apparent as rate of growth in student enrollment declined and as students changed their patterns of college attendance.

In addition, the growth in degree production was declining. (See Table 21 and Figure A). The decline in productivity growth was greater than for headcount enrollments. The number of baccalaureate degrees awarded in 1972 was 50.9 percent greater than the number produced in 1968. Five years later, the baccalaureate degrees produced in 1977 grew by only 6.1 percent over the number produced in 1973. An even sharper decline was noted in the production of doctoral degrees. A modest decline occurred in the percentage growth of master's degrees awarded. (See Table 22).

Student interests also were changing as they responded to supply/demand fluctuations in the job market.

Seventeen percent fewer baccalaureate degrees in teacher education were awarded in 1977 than had been five years earlier, although they still accounted for one-fifth of all baccalaureate degrees. Other baccalaureate areas showing declines in degree production included the social sciences, physical sciences, history, English, foreign languages and political sciences.

Baccalaureate degree production was growing in computer science, communication, nursing, accounting, public administration, geological

sciences, social work and fine arts.

At the master's level, degree production in teacher education continued to climb, accounting for almost one-half all master's degrees awarded in the state in 1977. Business administration and accounting made up 12 percent of total master's degrees awarded, social sciences about 7.5 percent, engineering almost 7 percent. Degree production in all other fields combined accounted for the remaining one-fourth of the degrees.

As a result of the changing trends, many degree programs offered by the colleges were producing small numbers of graduates. Many courses carried on the inventories of the colleges no longer were attracting sufficient student enrollments to justify their continuation.

Institutional Responses to Stabilizing Enrollments

It became clear that the colleges could not continue to add new programs, new courses and new faculty to staff the courses and programs while supporting those programs and courses with very low productivity and resultant high costs.

Program review procedures have been broadened to include assessments of overall operational efficiencies of institutional academic program offerings. As need is identified for new programs, they are paring course offerings and degree programs which are no longer justified.

They are establishing institutional priorities and making internal reallocation of resources in line with these priorities.

In the past two years, Texas public institutions have removed over

1800 courses from their inventories. They have phased out 102 degree programs. They have voluntarily withdrawn from Coordinating Board consideration an additional 38 requests to add new degrees.

These efforts to improve cost efficiency should assist in providing colleges the flexibility to remain responsive to needed changes in educational programming.

Doctoral Education

The number of Texas public university units offering doctoral degrees increased in the past 10 years from 12 to 20. In addition, six private universities offer doctoral work. Texas public and private colleges produced some 13,420 new doctorates between 1968 and 1977.

Nine general academic institutions offered doctoral work in 1968. Since that time, six additional universities have been authorized to award only one doctoral degree. Three health units were awarding academic PhD's in 1968, and two additional units have begun operations since that time. (See Table 23). The growth followed the trend of national expansion of graduate schools in the 1960s to meet the requirements of a rapidly growing research and educational market. Since the early 1970s there has been a dramatic reversal in career opportunities for doctorate-holders. Declining undergraduate college enrollments and decreases in research funds have resulted in a marked decline in academic positions, with further decreases projected for the 1980s.

The result is that doctorate production has begun to level off. The number of new doctorates produced annually by Texas public and private institutions increased from about 930 in 1968 to a high of 1,530 in 1974, with a decline to just under 1,500 in 1977.

Imbalance in Doctoral Supply/Demand

Production of new doctorates continues to increase nationally, while academic employment opportunities decline. Between World War II and 1970, academia furnished employment to about one-half the new PhD's. Such opportunities in the 1980s are projected to be available for only one-fifth to one-eighth of the new doctoral graduates. As a result of the depressed academic labor market, a larger proportion of new doctorates is expected to seek employment in non-academic sectors of the economy. It is difficult to estimate the extent of increase in employment opportunities in the non-academic positions.

The National Center for Education Statistics projects that the number of doctorates will rise steadily from 34,000 degrees awarded annually in the United States in 1976 to 42,000 doctorates by 1986. In his 1976 study, PhD's and the Academic Labor Market, Allan Cartter estimated that graduate schools at current capacities could produce 40,000 to 45,000 doctorates annually.

Estimates of demand all show dramatic decreases, although the number vary according to the methods used. The Southern Regional Education Board reports that the average annual number of new faculty positions in the United States during the 1960s averaged about 38,000, approximately 14,000 of which were filled by new doctoral graduates. By the 1970s these figures had dropped to less than 21,000 positions annually, and approximately 11,000 of them for new doctorates. Projections for the 1980s indicate total demand for new faculty of less than 7,000 positions per year, with openings for new PhD's dropping to less than 5,000.

Cartter based his estimates on annual hiring of junior faculty. He reported that an annual average of about 27,000 junior faculty were hired between 1962-1972. He estimated this annual average will be no more than 16,000 between 1972-82 and will decline to less than 10,000 during 1982-92.

Doctoral Surplus in the South

College enrollments in the South have not declined as rapidly as have enrollments in other parts of the country, yet a 1978 SREB study of doctoral supply/demand in the South projects a 38 percent surplus of new doctoral level faculty between 1981 and 1986, or an annual average of 2,600 new PhD's who may not find employment. The SREB study provided high, low, and intermediate estimates. The estimated oversupply of PhD's is based on the highest likely projections of demand.

SREB projects production of doctoral degrees in the South to increase from about 7,500 in 1976 to more than 10,000 by 1986. This represents a 36 percent increase for the South, compared to 23 percent increase for the United States.

Before making its projection of oversupply, the SREB subtracted the doctorates expected to be earned in education, whether PhD or EdD, since most holders of these degrees do not become faculty members in higher education. Doctorates in all fields of education are expected to make up a third of the total doctorates awarded in the South by 1986. This estimate anticipates a 46 percent increase in education doctorates awarded in the South, as compared with an increase of 32 percent in all other doctorates.

Doctoral Production in Texas

The number of new doctorates produced by Texas public and private universities grew rapidly until 1974 and has declined since that time. The increased number of doctoral degree program offerings and stabilizing number of graduates has resulted in a growing number of programs with low productivity.

The number of doctoral programs being offered by Texas public institutions increased from just over 200 in 1968 to almost 300 in 1977. As noted earlier, six of those programs were approved for institutions which previously had not offered doctoral-level work. The bulk of the increase broadened doctoral offerings at the nine universities with existing doctoral programs.

This growth in number of programs has been accompanied by increased enrollments in doctoral work but a stabilization to moderate decline in number of degrees being awarded. The trend may indicate that more students are pursuing doctoral degrees on a part-time basis, that the depressed employment market is encouraging more to stay to pursue post-doctoral studies and that some may be opting not to complete their doctoral programs.

Headcount enrollment in doctoral programs at public senior universities increased from about 5,540 in 1968 to almost 9,200 in 1977. This 65.7 percent increase occurred at a time in which doctoral program headcount enrollment averaged 2.8 percent of the total enrollment. Private university enrollment, despite yearly fluctuation, has been remarkably constant. (See Figure B).

During the 10-year period, production of doctoral degrees in all fields of education increased by 134.9 percent, growing from 172 to 404 at public universities. The corresponding growth in non-education PhD degrees was 47.3 percent, an increase from 592 to 872. In 1968, education doctorates accounted for 22.5 percent of all doctorates granted by public universities, and by 1977 its share had increased to 31.7 percent. (See Table 24 and Figure C).

There were distinct decreases in the number of doctoral degrees being earned in English, biological sciences, engineering and home economics. Noticeable increases in doctoral degrees occurred in agriculture, social sciences and those fields closely related to medical education.

Private institution production of non-education PhD's increased by 30.6 percent, from 157 in 1968 to 205 in 1977. The relative share of education to non-education PhD's remained constant at about 5 percent over the 10-year period. (See Table 24 and Figure C).

Projection of Texas Doctoral Graduates

Even with the annual production of doctorates stabilizing, Texas public universities are projected to graduate between 13,000 and 14,000 new doctorates during the next ten years. Private universities are projected to produce an additional 2,000 PhD's during that time. (See Table 25).

Enrollment in doctoral programs at public institutions is projected to reach 10,450 by 1987, as compared to 9,179 in 1977. Enrollment in doctoral programs at private institutions is projected to increase from 798 in 1977 to 817 by 1987. (See Figure B).

The higher estimate is based on the expected gradual decline in PhD production at established institutions being offset by the start-up of production in the programs authorized for the six new doctoral-granting institutions. The low projection is based on a more pronounced decline in PhD production as evidenced since 1974.

In the projections, the 10-year average doctoral enrollment proportion of 2.8 percent of total enrollment at public institutions and 1.0 percent of total enrollment at private institutions was applied to the projected senior college headcount enrollments contained elsewhere in this report. The 1978 doctoral program (includes health related) enrollment is projected at 9,323 and 752 for public and private institutions, respectively. The continued trend of overall enrollment increase is expected to raise doctoral enrollment to 10,450 at public universities and 817 at private universities in 1987. This represents a projected 11.8 percent increase in doctoral enrollment over the 10-year period.

Projected production of PhD degrees was based on the number of degrees awarded relative to headcount enrollment in doctoral work. This proportion has ranged from a low of 13.8 percent in 1968 to a high of 17.0 percent in 1971. Since 1974, when enrollment and PhD's awarded reached their peak, the trend has been one of stabilization and moderate decline. Based on a straight line projection of 14 percent or 13 percent enrollment, potential PhD production from 1978 to 1987 could amount to a high of 14,000 graduates or a low of 13,000 at public universities. A projection of 27.5 or 25.0 percent of enrollment for private institutions yields potential PhD production ranging from a high of 2,191

to a low of 1,993. This projection compares with a production of 11,234 and 2,186 for public and private universities, respectively, in the period from 1968 to 1977. It is anticipated that the major portion of the decline in rate of PhD production will continue to occur in the non-education PhD programs.

TABLE 20

HEADCOUNT ENROLLMENT IN NEW INSTITUTIONS
Public Senior College Units Which Began Operations 1970-75

<u>Upper-Level Universities</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Projected (1987)</u>
Corpus Christi State University	969	1,603	1,966	2,254	2,413	3,237
University of Houston at Clear Lake City		1,069	2,621	4,032	4,830	8,634
University of Texas at Dallas	382	700	3,333	4,413	5,333	8,139
University of Texas of the Permian Basin	1,112	1,352	1,432	1,471	1,575	1,735
Texas Eastern University	507	874	1,215	1,499	1,797	2,768
East Texas State University at Texarkana	535	615	1,048	1,094	1,151	1,545
Laredo State University	648	758	810	757	793	1,065
Pan American University at Brownsville	(397)	433	546	702	1,019	1,822
Sul Ross at Uvalde	256	233	606	515	589	766
University of Houston at Victoria Center	358	607	653	757	694	740
<u>Other New Units</u>						
University of Texas at San Antonio	1,113	1,620	4,437	7,486	7,849	11,614
University of Houston-Downtown College		3,537	4,301	4,464	4,576	5,578

TABLE 21

DEGREE PRODUCTIVITY 1967-68 TO 1976-77
Texas Public and Private Colleges and Universities

	Public	67-68	68-69	69-70	70-71	71-72	Percentage Increase 71-72 over 67-68	72-73	73-74	74-75	75-76	76-77	Percentage Increase 76-77 over 72-73
Baccalaureate		23,539	28,211	31,502	33,560	35,512	50.9	37,267	38,532	39,331	40,049	39,548	6.1
Masters*		5,806	6,087	6,564	7,270	8,433	45.2	9,161	10,122	11,187	12,771	13,154	43.6
Doctorate*		764	954	999	1,135	1,157	51.4	1,185	1,295	1,208	1,261	1,276	7.7
Professional													
Law		586	552	587	539	789	34.6	871	861	829	1,035	1,143	31.2
Veterinary Medicine		102	124	124	126	126	23.5	126	126	127	126	135	7.1
Optometry		24	48	44	60	59	145.8	56	59	62	70	56	*
Medicine		236	234	288	272	323	36.9	380	474	497	578	616	62.1
Dentistry		95	95	94	92	96	1.1	94	110	121	141	154	63.8
Private													
Baccalaureate		7,762	8,826	8,717	9,682	9,984	28.6	9,861	10,382	11,253	11,405	10,598	7.5
Masters*		1,618	1,966	2,018	2,244	2,467	52.5	2,713	2,678	2,900	3,192	3,170	16.8
Doctorate*		166	172	222	260	258	55.4	245	238	228	181	217	-11.4
Professional													
Law		398	467	442	530	499	25.4	649	829	791	816	968	49.2
Veterinary Medicine													
Optometry													
Medicine		85	85	88	89	84	-1.1	111	244	157	176	134	20.7
Dentistry		91	90	98	97	92	1.1	92	92	121	114	124	34.8

*Includes Medical Masters and Doctorate degrees

FIGURE A

DEGREE PRODUCTIVITY 1967-68 TO 1976-77
TEXAS PUBLIC AND PRIVATE COLLEGES AND UNIVERSITIES

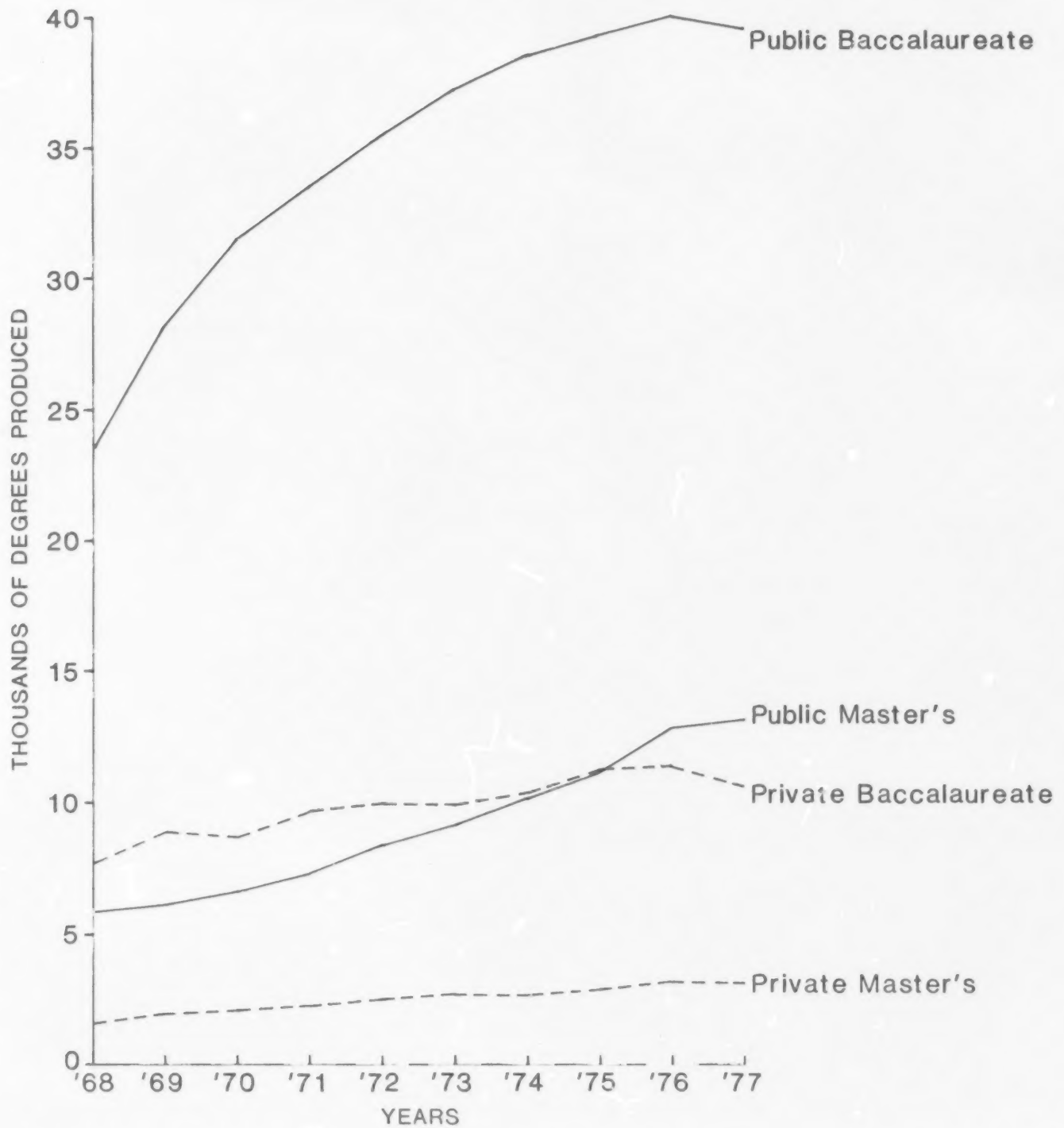


TABLE 22

PERCENTAGE GROWTH IN DEGREES AWARDED
Texas Public and Private Colleges and Universities
1967-68/1971-72 and 1972-73/1976-77

<u>Public Colleges</u>	<u>Percentage Growth 67-68/71-72</u>	<u>Percentage Growth 72-73/76-77</u>
Baccalaureate	50.9%	6.1%
Master's	45.2	43.6
Doctoral	51.4	7.7
<u>Private Colleges</u>		
Baccalaureate	28.6%	7.5%
Master's	52.5	16.8
Doctoral	55.4	-11.4

TABLE 23

TEXAS INSTITUTIONS OFFERING DOCTORAL DEGREES 1968 and 1977

<u>Public</u>	<u>1968</u>	<u>1977</u>
Institutions with Authority for Only <u>1</u> PhD Degree	0	6
Lamar University (1970)		
Stephen F. Austin State University (1975)		
Sam Houston State University (1970)		
Texas A&I University (Kingsville) (1975)		
Texas Southern University (1974)		
The University of Texas at El Paso (1974)		
Institutions with Limited PhD Offerings (2-20 programs)	3	3
East Texas State University		
The University of Texas at Arlington		
The University of Texas at Dallas		
Institutions with Broad Array of PhD Programs (21 +)	6	6
North Texas State University		
Texas A&M University		
Texas Tech University		
Texas Woman's University		
The University of Texas at Austin		
University of Houston		
Health Science Centers	3	5
UT Health Science Center at Dallas		
UT Health Science Center at Galveston		
UT Health Science Center at Houston		
UT Health Science Center at San Antonio (1970)		
Texas Tech School of Medicine (1973)		
Total Public	<u>12</u>	<u>20</u>
<u>Private</u>	6	6
Baylor University		
Southern Methodist University		
Texas Christian University		
University of Dallas		
William Marsh Rice University		
Baylor School of Medicine		
Total, All PhD Granting Institutions	<u>18</u>	<u>26</u>

FIGURE B

DOCTORAL PROGRAM HEADCOUNT ENROLLMENT

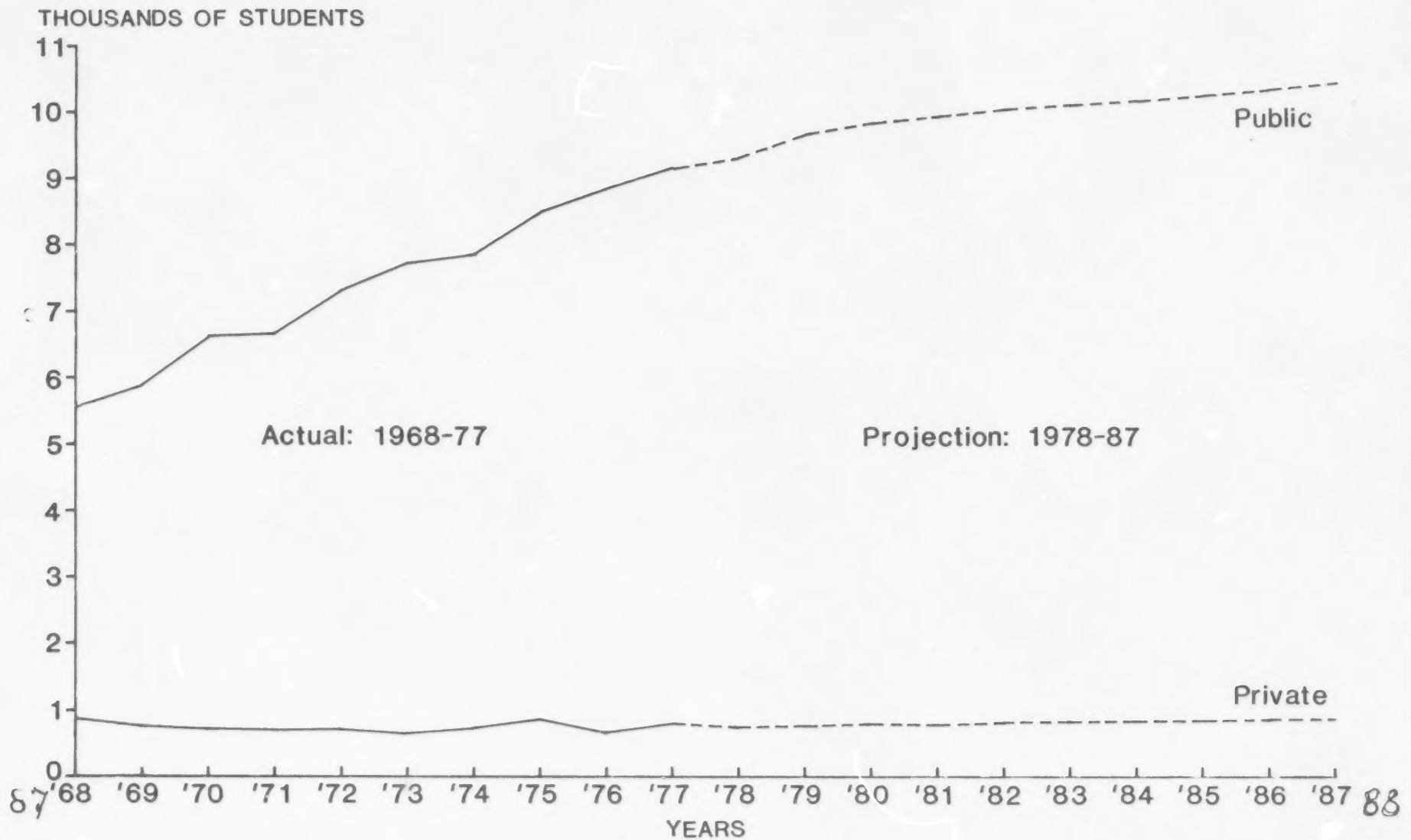


TABLE 24

PhD Degrees Produced by Texas Public and Private Universities

<u>Year</u>	<u>Education Doctorates</u>		<u>Non-Education Doctorates</u>		<u>Total Doctorates</u>	
	<u>Public</u>	<u>Private</u>	<u>Public</u>	<u>Private</u>	<u>Public</u>	<u>Private</u>
1968	172	9	592	157	764	166
1969	272		682	172	954	172
1970	268	9	731	213	999	222
1971	326	12	809	248	1,135	260
1972	366	8	791	250	1,157	258
1973	336	8	849	236	1,185	244
1974	402	7	893	231	1,295	238
1975	363	10	845	218	1,208	228
1976	413	4	848	177	1,261	181
1977	<u>404</u>	<u>12</u>	<u>872</u>	<u>205</u>	<u>1,276</u>	<u>217</u>
TOTAL	3,322	79	7,912	2,107	11,234	2,186
TOTAL (Public and Private)						
	3,401		10,019		13,420	
129.8% increase in Education PhD's						
44.0% increase in Non-Education PhD's						
60.5% increase in PhD's						
134.9% increase in Public Education PhD's						
47.3% increase in Public Non-Education PhD's						
67.0% increase in Public PhD's						
33.3% increase in Private Education PhD's						
30.6% increase in Private Non-Education PhD's						
30.7% increase in Private PhD's						

FIGURE C

PHD'S AWARDED BY TEXAS
PUBLIC AND PRIVATE SENIOR COLLEGES
AND UNIVERSITIES

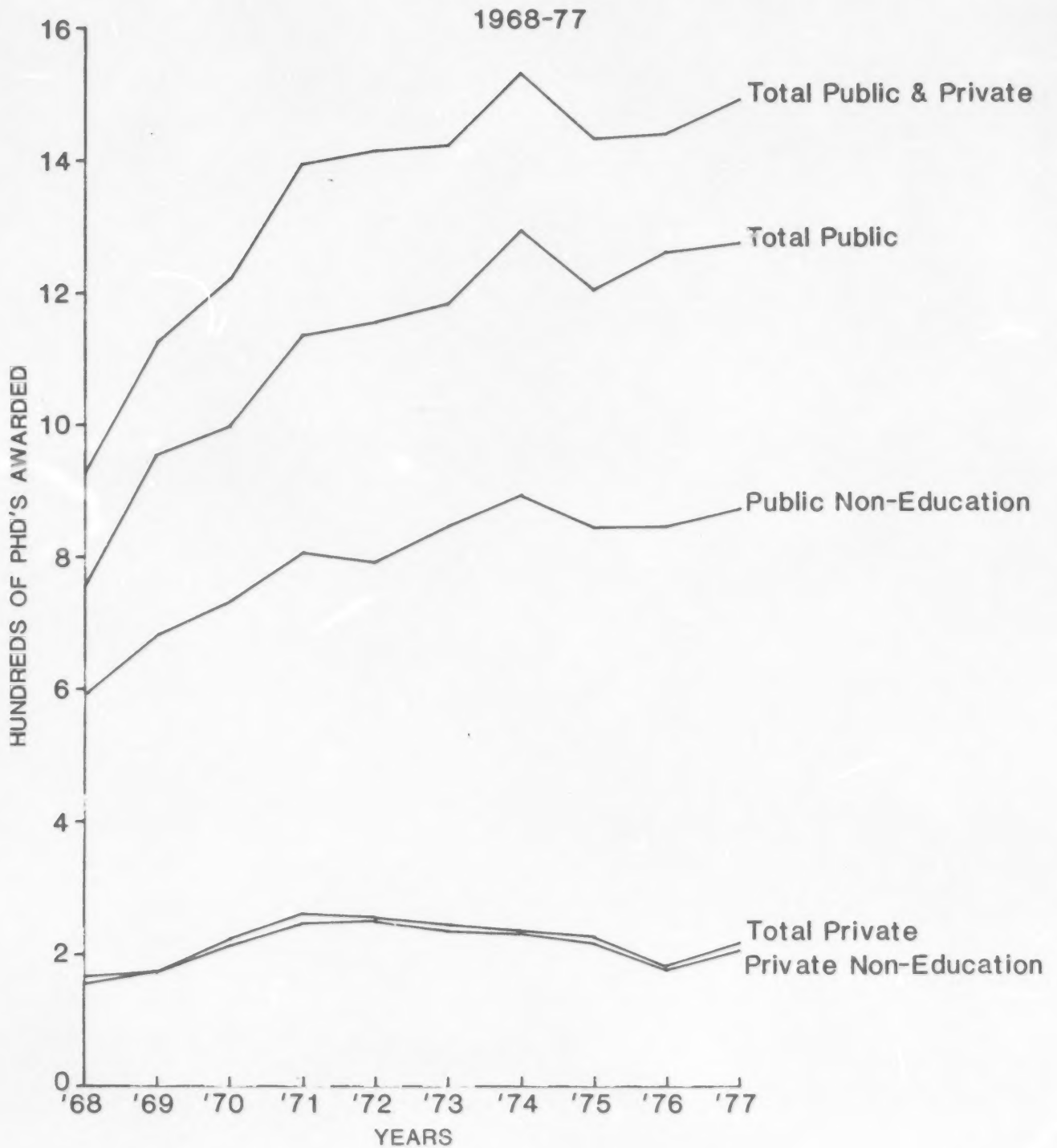


TABLE 25

Projected PhD Production by Texas Public and Private Universities*

1978-87

	<u>Public</u>		<u>Private</u>	
	<u>High Est.¹</u>	<u>Low Est.²</u>	<u>High Est.³</u>	<u>Low Est.⁴</u>
1978	1,305	1,212	207	188
1979	1,357	1,260	212	193
1980	1,377	1,278	219	199
1981	1,391	1,292	219	200
1982	1,403	1,304	221	201
1983	1,416	1,314	221	201
1984	1,427	1,325	222	202
1985	1,439	1,336	222	202
1986	1,451	1,347	223	203
1987	<u>1,463</u>	<u>1,359</u>	<u>225</u>	<u>204</u>
Total	14,029	13,027	2,191	1,993

¹based on projected 14.0% of enrollment earning degrees²based on projected 13.0% of enrollment earning degrees³based on projected 27.5% of enrollment earning degrees⁴based on projected 25.0% of enrollment earning degrees

*Utilizes enrollment projection data from CB Study Paper 27 and 10-year average doctoral share of total enrollment for public universities of 2.8% and 1.0% for private institutions.

PRIVATE HIGHER EDUCATION

The Texas independent colleges and universities are an important part of the economic and cultural base for the state. They have been and continue to be an essential resource. They exist by their own right outside of government, but they relate closely to objectives of government and are affected by government policies. It is important that state actions not harm the independent colleges and universities. It is also important that those schools be assisted where appropriate to meet public purposes.

The independent sector of higher education consists of 37 senior colleges and universities, enrolling 73,277 students, and six junior colleges with 2,215 students. Additional information on these institutions is included elsewhere in this document.

In a time of stabilizing enrollments, the independent colleges and universities face an even more difficult future in the next decade than the public institutions. They purchase their goods and services and utilities in the same marketplace as businesses and industries, which can pass on higher costs to consumers or which can introduce technological efficiencies into their manufacturing or sales processes. Colleges and universities have not found cheaper and more efficient and effective ways to educate the human mind. It requires above all else time and close contact with faculty and other students, and libraries and laboratories and buildings, all of which cost more each year as inflation continues relatively unabated.

If the institution is fortunate enough to have an endowment, part of it may be invested in the stock market, which probably means it is worth less than it was five years ago. Or part of it may be invested in other securities, whose return has barely kept up with inflation. And donors whose assets are in the same condition may be reluctant to make gifts of securities which they consider to be temporarily depressed. In the meantime every cost associated with keeping the school open has gone up. The only option available to most schools in this situation is to raise tuition charges and increase fees to keep up with operating costs.

The economics of the free marketplace affect this situation in at least two ways. If costs rise too sharply or become too high, the demand drops. Fewer students enrolled at higher costs will not improve the situation within the institution and, in fact, could make it worse. Moreover, as the price rises, students will turn more readily to a similar but less expensive alternative, that is, to the public colleges and universities. As the cost differential increases, students examine more carefully the uniqueness of the private college experience.

Types, sizes and programs of independent colleges vary widely. Those recognized for their high quality--by whatever criteria applied by parents, students and the public--probably will be able to survive during a decade of contraction in the size of the traditional college-age group. They will have the characteristics to enable them to compete effectively with the less expensive public colleges and universities. Those independent schools which do not enjoy that reputation and prestige will face greater difficulties. If they try to raise prices, they may drive

students into the public sector. If they adjust their programs to fit the public colleges which appear to be attracting their students, they will only have made themselves into more expensive versions of the public institutions. A time of escalating costs and shrinking numbers of students does not appear to be one in which to modify programs and change a college, but it may be equally perilous not to change. Each college will have to plot its own future.

There are not easy answers to the many problems that the independent colleges and universities will face. As the financial situation has become more binding on the colleges, they already have begun steps to economize their operations and reevaluate programs.

It will not be possible for the state to assist them with their internal problems and decisions. It is possible for the Coordinating Board to try to protect the private institutions from encroachments of public institutions that damage them. The Coordinating Board will continue to take the independent sector into account when considering the establishment of new programs. The state should continue to fund the Tuition Equalization Grants program to offset in part the difference between private and public college costs as a means of protecting the freedom of choice for students who wish to attend an independent college. In these ways the state can continue to draw upon the resources of a strong independent sector of higher education.

PROFESSIONAL HIGHER EDUCATION

One of the major areas of higher education requiring constant Coordinating Board surveillance is the professional fields. There are a number of professional areas that will be studied in depth by the Coordinating Board in the years ahead. These include teacher education, engineering, architecture, journalism, business administration and veterinary medicine. Currently a study is underway on public administration programs, both existing and proposed. At this time, the Coordinating Board has given special attention to health related professions and the legal profession, on which reports are set out on the following pages.

Health Related Education

The entire area of health related education--including medical education, dental education, nursing and allied health education--is in a period of rapid change and development. The public is demanding more accountability in all facets of education, and the health related fields are no exception. Phrases such as geographic maldistribution, specialty maldistribution and manpower shortage appear with increasing frequency. Health related education constitutes a substantial proportion of the monies appropriated for higher education in Texas. The Coordinating Board continues to support the efforts of the schools to achieve the highest possible quality in health related education while remaining cognizant of supply and demand factors and fiscal implications.

Medical Education

The Coordinating Board in the mid-60s recognized deficiencies and problems in medical education in Texas and developed recommendations and took steps to deal with them. Although not all of the problems have been overcome, the state continues to improve medical education, including the training of increasing numbers of physicians to serve the people of Texas.

Growth

In 1968, the state had four medical schools: University of Texas Southwestern Medical School in Dallas, University of Texas Medical Branch in Galveston, the newly opened University of Texas Medical School in San Antonio and the independent Baylor College of Medicine in Houston. In that year, these four schools awarded the MD degree to 321 students.

The four medical schools now have doubled to eight, with the addition of the University of Texas Medical School in Houston, Texas Tech University School of Medicine in Lubbock, Texas College of Osteopathic Medicine in Fort Worth and the Texas A&M University College of Medicine in College Station, which admitted its first 32 students in July 1977. In 1978, a total of 815 students were graduated with MD and DO degrees, an increase of 154 percent in 10 years--despite the fact that Texas Tech University School of Medicine had no graduates in 1978 due to the changeover from a three-year program to a four-year program. (See Table 26).

The number of students entering medical school each year has risen

even more dramatically. In 1968, 408 students entered medical school; in 1973, 787 students entered; and this year 1,103 students entered medical school. This represents an increase of 170 percent in 10 years. (See Table 27).

Although progress has been impressive, it is essential to look ahead for a complete understanding of the status of medical education in Texas. By 1985, the number of graduates is projected to be 1,263. In the same year, the total entering class size could be well over 1,300. Full development of the existing Texas medical schools eventually could produce some 1,400 or more new physicians each year, more than a fourfold increase over 1968. (See Table 28).

A look at the actual supply of physicians also is needed. The nation has gone from 121 active non-federal physicians per 100,000 population in 1949 to 163 per 100,000 in 1976. In southern states, the average is 138 per 100,000. In 1970, Texas had 111 physicians per 100,000 population; by 1976, this figure had grown to 134, increasing 21 percent in six years. The total number of licenses granted to practice medicine in Texas also has grown. In 1968, 12,242 physicians held licenses to practice. In 1977, 19,119 were licensed to practice, representing an increase of over 56 percent in nine years. During 1977, the Texas State Board of Medical Examiners issued 2,441 new Texas licenses. Twenty-four percent of them were issued to graduates of Texas medical schools, 36 percent to graduates of out-of-state medical schools and 40 percent to graduates of foreign medical schools. Texas apparently continues to be perceived as an attractive place to live and practice medicine. (See Table 29)

Distribution of Medical Doctors

In 1976, there were 23 Texas counties without an active MD. However, five of these counties did have at least one DO licensed to practice medicine, leaving only 18 counties without an MD or DO. The total population of those 18 counties represents only 27/100 percent of the entire state's population. All but three of the counties had population densities of less than four per square mile; 11 of them had densities of one or less.

Another important consideration involves the distribution of physicians by specialty. The trend toward increasing numbers of specialists and decreasing numbers of primary care physicians now seems to be reversing, and it is projected that by 1990, 50 percent of all physicians will be in primary care fields. In 1976, 46.8 percent of all Texas physicians involved in patient care, excluding interns and residents, were practicing in one of the primary care fields of general/family practice, internal medicine, pediatrics or obstetrics and gynecology. However, during the same year, 49.2 percent of all interns and residents in Texas were training in primary care fields. Of the 1978 medical school graduates, approximately 55 percent indicate plans to practice in one of the primary care fields.

Family Practice Residencies

House Bill 282, passed by the 65th Legislature, 1977, enabled the appropriation of funds for establishing and supporting family practice residency programs. During fiscal year 1978, a total of \$693,990 was disbursed to the 12 existing family practice residency programs;

\$70,100 was disbursed to eight programs in the planning stages. On Sept. 1, 1977, there were 267 family practice residents in training in Texas. As of Sept. 1, 1978, that number had increased to 309. The number of residents in training during fiscal year 1980 is projected to be 398, which would be a 49 percent increase since September 1977. For fiscal year 1981, the number is projected to be 532, almost double the 1977 level.

In addition to the 12 programs in operation in 1978, there are five programs which will become operational during fiscal year 1979. Although many of the programs being proposed are located in major metropolitan areas, a large number will be based in cities of medium size, including Wichita Falls, Midland, San Angelo, Baytown, Port Arthur, Victoria, Grand Prairie, Tyler and Clear Lake City. Additional possible future sites include Abilene, Lufkin, Conroe, Texarkana, Kerrville, Huntsville, Henderson, Nacogdoches and several other mid-sized cities. All of the family practice residency programs have a common goal--to encourage physicians to practice in medically underserved areas and thereby improve the health of the Texas citizens. Prospective physicians participating in a family practice residency program in Texas will be "tracked," to determine whether or not they actually settle and practice in medically underserved areas. Only a longitudinal study of this type can determine whether or not the programs are ultimately successful.

Fifth Pathway Program

The enactment of House Bill 768 by the 64th Legislature, 1975,

provided an avenue, known as the Fifth Pathway, enabling a student of a foreign medical school recognized by the World Health Organization to become eligible for licensure to practice medicine in Texas after completing specified requirements. Among the requirements is completion of one academic year of supervised clinical training at a Texas medical school.

The General Appropriations Acts for both the 1976-77 biennium and the 1978-79 biennium appropriated \$750,000 per year to the Coordinating Board for clinical training of foreign medical students, with the amount per student not to exceed \$25,000. The students must be bona fide Texas residents, as defined in the Texas Education Code. From 1976 through 1978, 16 students have enrolled for the year of supervised clinical training in a Texas medical school: three at Baylor College of Medicine, eight at University of Texas Health Science Center in San Antonio, two at University of Texas Medical Branch at Galveston, two at University of Texas Health Science Center in Dallas and one at University of Texas Health Science Center in Houston. Texas Tech has been unable to accept any Fifth Pathway students because of accreditation requirements.

The Health Professions Educational Assistance Act of 1976 required that medical schools increase their third-year enrollment to accommodate American students who wished to transfer from foreign medical schools during each of the academic years 1978-79, 1979-80 and 1980-81. Any school refusing to do so stood to lose capitation funding. Late in 1977, the requirement was changed. As the law now stands, medical schools

seeking capitation support must increase their third-year enrollment by five percent of the first or third year classes, whichever is lower, in the 1978-79 academic year only. Procedures were developed for allowing medical schools to request a waiver for various reasons, but any school without a waiver which refused to increase its third-year enrollment will receive no federal capitation funding for fiscal years 1978, 1979 and 1980. The full impact of this legislation is not known at this time, but it could have some effect on participation in the Fifth Pathway Program.

Dental Education

The Coordinating Board in the past made recommendations regarding dental education which included proposals for establishing schools. Accordingly, the University of Texas Dental School at San Antonio was established in 1970. It joined Baylor College of Dentistry in Dallas and the University of Texas Dental Branch in Houston in statewide efforts to increase the supply of dentists in Texas.

During the past decade, the three dental schools indeed have responded to the needs of the citizens of Texas. In 1968-69, the two operational dental schools admitted a total of 200 entering students; 416 students entered Texas dental schools in 1978-79, an increase of 108 percent. (See Table 30).

In 1968, 186 persons received the DDS degree; by 1977, the number had grown to 278, an increase of almost 50 percent. Beginning in 1981, when this year's entering classes complete their studies, the number of graduates probably will approach 400 per year. The full impact of the

increasing class sizes will not be felt until that time.

There were 41 Texas counties in 1976 without an active practicing dentist. However, 32 of those counties had lost population between 1960 and 1970; 22 of them experienced declines of 10 percent or greater. The population of the 41 counties represented less than one percent of the state's total population.

Between 1968 and 1976, the number of dentists nationwide increased by 12 percent. During the same period, the number of dentists in Texas rose by approximately 41 percent. This represents a remarkable achievement by the state.

At present there is concern that the state may be educating more dentists than will be needed. Dental hygiene and preventative practices have cut caries by approximately 50 percent in recent years. The equipment and procedures dentists use today permit a dentist to treat four patients in the time it took to treat one a generation ago. Whether or not the state is preparing too many dentists will need to be studied carefully in the years ahead.

Nursing Education

The number of nursing programs, nursing students and graduates in Texas has increased tremendously over the past decade. But undoubtedly a shortage of nurses still exists in the state. Efforts to overcome that deficiency have been of primary concern to the Coordinating Board and nursing leaders in Texas. As in other health care fields, one of the continuing problems is geographic maldistribution. In 1976 approximately 54 percent of the active Texas nurses practiced in one

of the five metropolitan counties: Bexar, Dallas, Harris, Tarrant or Travis. Those counties represented 44 percent of the state population and 48 percent of the licensed hospital beds in Texas.

It seems apparent that the increase of programs in small or mid-sized cities and the growing emphasis on rural health care will improve this maldistribution. The Coordinating Board in recent years has approved baccalaureate nursing programs in such locations as Lubbock, Canyon, San Angelo, Tyler, Corpus Christi and Nacogdoches, and associate degree programs in such mid-sized cities as Edinburg and Stephenville. Their establishment may help to alleviate the shortage of nurses in those non-metropolitan areas.

Growth in all types of nursing education in Texas has been phenomenal since 1966. This expansion is reflected in student enrollment, production of graduates and growth in the number of programs. In 1966, there were 35 professional nursing programs in Texas--23 diploma, five associate degree and seven baccalaureate programs. In 1973, there were seven diploma programs, 24 associate degree programs and 12 baccalaureate programs, for a total of 43. The 54 professional nursing programs now offered in 1978 include six diploma programs, 31 associate degree programs and 17 baccalaureate programs. (See Table 31).

In 1966, there were 3,191 students enrolled in Texas nursing programs; by 1973 the number enrolled had risen to 11,579. In 1977, 14,908 were enrolled, an increase of 367 percent over 1966. The number of RN graduates in 1966 was 714; in 1973, 2,156 RN's graduated; and in 1977, the number of graduates was 3,766, an increase of 427 percent. (See Tables 32 and 33).

Nursing manpower is beginning to reflect the increase in training programs. In 1972, 50,737 nurses were licensed to practice in Texas, including those registered in Texas but living out-of-state; the comparable number in 1976 was 64,024. The number of nurses registered in Texas and residing in Texas in 1976 was 42,403. However, only 30,558 or 72 percent of these nurses were in active practice. Of these active nurses, 83 percent or 25,441 worked full time, whereas 17 percent or 5,117 worked part time.

The ratio of active RN's per 100,000 population has improved in the state, although Texas still lags behind the national ratio. In 1966, there were 188 active RN's per 100,000 population in Texas. The ratio in 1976 had improved to 246 RN's per 100,000 population. As new programs begin graduating nurses and as in-migration to the state from the North and East increases, improvement is anticipated.

Several issues regarding nursing education continue to concern the Coordinating Board. One is the need to educate excellent nurses in sufficient numbers to provide quality health care in hospitals and other health-care settings. Second, career mobility should be provided for registered nurses who want to extend their education to the baccalaureate degree level. Third, it is necessary to upgrade the educational qualifications of nurses for teaching positions and for supervisory roles in hospitals and other health-care settings.

The first issue is being addressed by the establishment of new nursing programs in both senior institutions and community colleges.

In regard to career mobility, the Coordinating Board since 1974

has approved five RN-BSN programs which are based on a model curriculum to admit graduates of diploma or associate degree programs and to give those RN's access to the baccalaureate degree. The programs and courses are designed to build upon the basic nursing programs which students completed prior to admission into the RN-BSN program. In addition to the five RN-BSN programs, most traditional BSN programs offer RN's some type of special track or option for completion of the baccalaureate degree in nursing. Those programs, for the most part, allow a generous plan of course challenges, which permit the student to receive credit for knowledge and experience already gained in the nursing profession or in previous training.

The third issue, that of upgrading the educational qualifications of nurses for teaching and supervisory positions, was addressed by the Coordinating Board in July 1977 when five new master of science in nursing degree programs were approved. They supplement master's programs already offered by Texas Woman's University in Denton, Dallas and Houston; University of Texas at Austin; and University of Texas Health Science Center at San Antonio.

These issues will continue to be considered as nursing education develops throughout the state.

Allied Health Education

The field of allied health is one of the most rapidly expanding and changing areas of education. Until the late 1960s and early 1970s, most allied health programs were based in and operated by hospitals.

Other training programs took the form of apprenticeships in private medical and dental offices. Medical and dental schools also offered some allied health programs. The costs of conducting the programs typically were high while enrollments generally were small. Reluctance to pass the high training costs on to the patient, especially in view of rising health-care costs, caused many hospitals to alter their role in preparing entry-level allied health personnel. Changing educational and accreditation requirements also were factors. Many hospital-based certificate programs have affiliated with academic institutions and become degree programs, and this movement will continue. This fact has definite implications for Texas since the state is and will be funding allied health programs which previously were supported by hospitals. In addition to schools of allied health in the health science centers, almost every academic institution offers at least one allied health program. State appropriations for allied health education are increasing at an extremely rapid rate.

Within a given allied health field credentials awarded upon completion of the program are not necessarily uniform: one dental hygiene program may award an associate degree, another a bachelor's degree. Both programs are accredited on the basis of the same standards, and graduates of both programs take the same registry exam. In many of the allied health fields, entry-level personnel are judged on the basis of licensure, certification or registration in their respective fields rather than educational level attained. A certified dental hygienist who has attended a two-year associate degree program

often may fill the same job at the same salary as one who has been trained in a four-year bachelor's degree program.

A serious problem in the area of allied health concerns career mobility. In most of the allied health fields, no formal pathway exists for vertical mobility. Many students who were trained in a technical field desire training in management or education for job advancement. For example, a person with an associate degree in radiologic technology would like to earn a bachelor's degree. In most cases, additional instruction in management or education is desired so that the individual can become a department supervisor or perhaps teach in a radiologic technology program. The same situation is seen at higher levels, as in the case of a medical technologist with a bachelor of science degree in medical technology who would like to work toward a master's degree.

The Coordinating Board faces two questions. What is the appropriate type of additional training for supervisors and educators in the allied health fields? Is it necessary for them to obtain an additional degree in their respective fields, or would a degree in allied health education or allied health administration be more appropriate since they already have received the technical training in their fields? The University of Texas Health Science Center in Dallas, School of Allied Health Sciences, offers a bachelor of science degree with a major in allied health education. It is designed for students wishing to pursue a teaching career in their chosen allied health professions. The program has three options: one designed for registered radiologic technologists, one designed for registered respiratory therapists and a general option for

other allied health professionals who have been trained at the associate degree or certificate level. Students receive most of their additional training in general allied health education, with only a small proportion of their time spent in additional clinical training in their specialized field.

The Coordinating Board staff feels that it is necessary to study the whole of allied health, with special emphasis on the different levels of training within given fields and the problem of career mobility.

Financial Considerations

Costs of health related education have increased at an extremely rapid rate. State appropriations for health related education have escalated much faster than appropriations for higher education as a whole. In the 1968-69 biennium, appropriations for health related education totaled \$97 million, 14.3 percent of the amount appropriated for all higher education. In the 1974-75 biennium, the amount appropriated for health related education was \$289 million, or 19.2 percent of the total amount appropriated for all higher education. In the current biennium, health related education constitutes 25 percent of the appropriations for all higher education, totaling over \$720 million.

During the past six bienniums, funds appropriated for all higher education increased 327 percent while amounts appropriated for health related education rose 643 percent. These figures do not include appropriations generated by formula funding of health related programs in the academic institutions; those funds have also increased dramatically.

In light of the widespread public sentiment for tax reform and decreased government spending on all levels, as well as the continuing rise in health-care costs, it is obvious to the Coordinating Board that state appropriations for health related education during the next decade cannot increase as rapidly as they have during the last decade.

However, the State of Texas is deeply committed to the established and developing health science centers, medical and dental schools, and other health related educational activities. It is essential for the development and maintenance of quality education that the state continue a sustained level of fiscal support for medical, dental, nursing and allied health education. If cost escalation is to be restrained at all, it must be done by committing funds first to existing schools and programs, rather than by continuing to approve and develop new schools or programs which may dilute the level of productivity or the quality of existing health related education.

Legal Education

Texas has eight law schools. Four of them are tax supported: Texas Southern University's Thurgood Marshall School of Law, The University of Houston's Bates College of Law, The University of Texas at Austin School of Law, and Texas Tech University's School of Law. Four are independent: Baylor University School of Law, St. Mary's University School of Law, Southern Methodist University School of Law, and South Texas College of Law. Three of the law schools are in Houston; one each is in San Antonio, Austin, Dallas, Lubbock, and Waco.

In 1972, faced with requests from four institutions for new law

schools, the Coordinating Board initiated a study of legal education in Texas. An advisory committee of eight members was supported by a task force of eleven members. The three-month intensive study resulted in a report which led to the conclusion that the needs were being met by existing schools and that no new law schools should be authorized for Texas.

More than five years having passed since the completion of the study, the Coordinating Board staff has brought up to date the previous work in order to assess the present status of legal education and availability of legal services in Texas.

Enrollment Growth at Existing Law Schools

An examination of the developments in the last ten years shows continuing growth. Total headcount law school enrollment in 1968-69 was 3,728; for 1973-74, 5,727; and for 1978-79, an estimated 6,576 (Table 34). The totals for entering classes have increased by almost 1,000 from 1,500 (estimated) in 1968, to 2,219 in 1973, to an estimated 2,459 in 1978. (Table 35) Texas schools are now graduating approximately 2,000 new lawyers each year. With the growing enrollment, the number of graduates also has increased, from 1,025 in 1968-69, to 1,520 in 1972-73, to 1,962 in 1977-78. (Table 36)

The eight law schools reported ethnic background of students from 1974-75 through 1977-78. These data are not available for Texas Southern University for 1973-74, and for the University of Houston for 1978-79.

The student headcount for black students increased from 262 in 1974-75 to 378 in 1977-78, from 4.35 percent to 5.81 percent of total headcount. Headcount for students of Hispanic origin increased from 304 in 1974-75 to 412 in 1977-78--or from 5.05 percent to 7.08 percent of total headcount. Students of Asian or Pacific Islands background accounted for a very small number, with percentages up from 0.25 percent in 1974-75 to 0.45 percent in 1977-78. Students of American Indian descent numbered 3 (0.05 percent) in 1974-75, and 19 (0.29 percent) in 1977-78. (Table 37)

The increasing numbers and percentage of women in law schools is the most notable change in the characteristics of the student population. Numbers of women increased from 699 (12 percent) in 1973-74 to 1733 (27 percent) in 1977-78. The University of Texas at Austin and the University of Houston did not report these data for 1978-79. (Table 37)

The growth of students and degrees conferred has been based on the development of additional facilities in two public and two private law schools. In addition, one public law school has facilities under construction which will give better space average for the present law school activities.

Existing law schools project only slight enrollment increases for the next five years, estimating reaching about 6,750 by 1984, as compared with present enrollment of about 6,600. (Table 38) In 1972 law schools were asked about their plans for expansion. A similar question was used in the 1978 study.

The University of Texas at Austin School of Law has an addition of

216,000 square feet under construction at a cost of \$10,000,000. In 1972 the official reported headcount was 1,572. The projected annual enrollment over the next five years (through 1983-84) is 1,600.

The University of Houston Bates College of Law added 82,900 square feet at a cost of about 3.3 million. The college in 1972 projected the new facility would accommodate 750 additional students. This projected increase has not yet occurred; the headcount increase in 1978 is about 460 students larger than in 1972. The institution states that the original plans allowed for five instructional units, each to accommodate 500 students and 25-30 faculty. If demand for law school places justifies expansion, the University of Houston does not rule out facilities and enrollment growth.

Texas Southern University Thurgood Marshall School of Law has moved into the building being planned in 1972, 80,112 square feet costing \$3,351,913. In 1972 the plan was to accommodate 500 students. In fall, 1977, however, enrollment was 326. Projected enrollment for the next five years is about 350 per year.

Texas Tech University School of Law had moved into its permanent building by 1972 and has added no space. In 1972 it had entered the second stage of planned enrollment expansion, admitting two sections of first-year students. In fall, 1978, the third stage of growth has begun, with the addition of another section of the entering class. Projected total enrollment for 1983-84 is 650 students.

Baylor University School of Law in 1972 had 15,000 square feet of space under construction, which was completed at a cost of \$550,000. In 1972 the institution stated that 70 students could be added to the entering class, but that no decision had been made on such expansion. The first-year enrollment in 1972 was 142; in 1978 it was 173.

St. Mary's University School of Law stated in 1972 that more library space would be needed if enrollments were to expand. No space has been added; none is projected. Headcount enrollment in 1972-73 was 595; in 1978-79, 687. Projected enrollment shows a slight decline from 650 in 1979-80 to 600 in 1983-84.

Southern Methodist University stated in 1972 that with slight alteration the facilities of the School of Law could accommodate about 1,500 students. The enrollment then was 762. In 1978 it is 796. Projected enrollments are 800 per year through 1983-84; however, the 1972 statement is repeated: that approximately 1,500 students could be accommodated in the present facilities.

South Texas College of Law, as it announced in 1972, approximately doubled the size of its floor space and remodeled the existing space, adding over 50,000 square feet at an approximate cost of \$3,000,000. In 1972 the school had 803 students and announced plans to increase the head count enrollment to a total of 1,050 to 1,100. The fall, 1978, enrollment is 1,155, which is the projected enrollment through 1983-84.

Tables 38 and 39 show expansion of facilities and projected enrollments.

It is evident that the existing law schools' plans for further enroll-

ment growth are modest, stability rather than growth is the picture projected by the existing law schools for the next five years, although existing facilities could accommodate limited additional growth.

Availability and Distribution of Lawyers

The ratio of lawyers to population has improved steadily over the past ten years. In 1978 there was one lawyer for 626 people in Texas; in 1972, one for 581; and in 1977, one for 472.¹ Texas, therefore, is now slightly above the national average of 497 on this measure of accessibility of legal services.

According to the Texas Bar, annual new admissions to the bar have doubled over the past ten years (1,009 in 1968; 2,058 in 1977). Table 40 shows the year-by-year increase for Texas and the United States. These figures, which include all admitted to practice, regardless of date and place of graduation, cannot be directly compared to numbers of law school graduates in corresponding years.

Distribution of legal services, however, is another matter. As the number of lawyers has risen, they have become increasingly concentrated in urban areas. The two most populous Texas counties, Harris and Dallas, have 27.47 percent of the population of the state (1975 estimates) and 47.8 percent of the lawyers. Harris County, with 16.05 percent of the population, has 29.08 percent of the lawyers and 260 people per

¹A recent Southern Regional Education Board study put the 1977 figure at 501. The Coordinating Board staff study used Bureau of the Census and Texas State Bar statistics.

lawyer. Tables 41 and 42 show figures on distribution of legal services. Dallas County has 11 percent of the population of the state and 19 percent of the lawyers. In 1970 the county had 375 people per lawyer. By August, 1977, this figure had dropped to 289 citizens per lawyer. The lowest in the state is Travis County's ratio of 183 people per lawyer.

In 1977 only ten counties had population-to-lawyer ratios less than the statewide average of 472. These counties had 32 percent of the state's population, but 57 percent of the lawyers. On a county-by-county analysis, 70 Texas counties are less well served than they were in 1972.

It seems apparent that increasing the numbers of lawyers relative to statewide population does not insure more accessible legal services except in limited concentrated areas.

Employment of Graduates

Texas law schools report that most of their graduates are placed soon after graduation (May graduates by September 1, for example), with those not placed either intentionally pursuing further education or awaiting bar examination results. In answer to a question on differences in the job market in 1978 from the situation in 1973, one reported "no important difference." Some, however, mentioned the need to broaden one's geographic range and to be open to opportunities in less traditional positions in which to use one's legal training.

Comments of reporting schools in the ratio of jobs to graduates are given below.

"Jobs available are equal in number to our graduates."

"Approximately 86 percent of our graduates remain in the Houston area where the availability of jobs is exceptionally strong...the further job outlook for the University of Houston College of Law is optimistic." Job opportunities are "strong and growing."

"If the time used to determine this is after successful completion of bar results, jobs are available for virtually all of our graduates."

"Of those responding to Employment Surveys of recent graduating class, well over 90 percent were employed in legal-related positions which were viewed as permanent. Those reported as not employed were either pursuing additional education or were employed in non-legal capacity or awaiting bar results. Projecting these results indicates a trend of adequate job opportunities for law graduates."

"Ninety-five percent of 1977-78 graduates were employed by September 1, 1978, and the job market for Texas Tech Law School graduates continues to be bright for 1978-79."

"In 1977 we found that 96 percent of the graduates of the law school were employed within 6 months after graduation if they sought jobs. Those with problems tended to have very specialized interests or a desire to settle in Austin. In most of the state west of Austin, the demand for our students far outstrips the supply of interested persons. On the other hand, competition for the most prestigious and lucrative positions remains keen especially in Houston, Dallas, Ft. Worth, San Antonio, Austin and El Paso."

Job prospects for graduates are "good."

There is a "ratio of probably two students for every job in Dallas-- many opportunities in other Texas cities."

The schools were asked to compare the job market situation in 1978 with that of 1973. Their answers to this request follow.

"The important differences in the job market today are reflected in the expansion of non-traditional careers for lawyers.... The expanding demand for legal experience is evidenced by the 600 percent increase in recruiting schedules at Bates since 1976. These recruiters represent traditional as well as alternative career employers from several areas."

"Number one is student expectation; they seem to expect more to be done for them. Salaries at the top are much higher and the hiring much earlier and more sophisticated."

"Law school enrollments increased at a tremendous rate five years ago to meet the demands for legal services. Increased enrollments met those immediate needs. However, the demand for law school graduates in government (federal and state), in multi-national businesses, and a greater demand for legal services by segments of the business and social community, all serve to absorb law school graduates. In addition, today's graduates are also seeking employment in other than 'traditional' practice, utilizing both their legal and prelegal education."

"Graduates must broaden the geographic area in which they search for employment and must consider other types of employment than the traditional law related areas."

"(1) There is an ever increasing concentration of lawyers in the large cities;

"(2) In some states (e.g. California) where the number of law schools has not been controlled, there is obvious oversupply of lawyers;

"(3) There is a real 'sunbelt shift' in employment, bringing more people to Texas;

"(4) With highly qualified students and limited opportunities with the most exciting law jobs 'under-employment' is becoming a real threat."

Job prospects for graduates are "about the same" as five years ago.

"Firms are asking for more specialization as tax, oil and gas, labor law."

These replies do not suggest that employment is extremely difficult for the law school graduate who is flexible in choice of location. Neither is there any evidence of a shortage of new lawyers for available positions.

If the increasing number of lawyers in relation to population has not improved distribution, neither has it depressed salaries for beginning graduates.

In 1977 Texas law schools participated in a survey conducted by the National Association for Law Placement. Sue Hall, Placement Director, St. Mary's University Law School, and Gary Munneke, Assistant Dean and Director of Placement, University of Texas School of Law, discussed the Texas findings in the Texas Bar Journal, January, 1978. They pointed out the difficulties which confront investigators of this subject:

...obtaining information on salaries is not an easy thing to do since many employers are reluctant to make public such information. The task is complicated by the fact that the figure one sees is often not the true salary. Employee benefits such as insurance, profit-sharing and even office parking arrangements; bonuses, six-month raises, and cost-of-living differences from community to community all contribute to make it difficult to compare salaries.

They stated that the generalization that the larger firms pay higher salaries is subject to qualification by "many notable exceptions." Also the higher salaries in larger cities perhaps are partly due to the fact of "how large the largest firms are, since the median salaries offered by the smallest firms did not differ considerably from city to city."

The recent staff survey of Texas law schools included a question on beginning salaries of their graduates. The answers, shown in Table 43 are consistent with the figures given by Hall and Munneke (Texas Bar Journal, January, 1978).

Salary trends are also important. Hall and Munneke found "an upward shift in salaries in the past ten years." The Texas Bar Journal, January, 1968, reported (from a 1967 study) starting salaries ranging from \$4000 to \$7000, as contrasted with 1977 range of \$8,900 to \$20,000. The increases may be due to a combination of factors, chiefly inflation, and also higher salaries paid in other areas and in other professions such as accounting and teaching.

The law schools reported a noticeable increase in beginning salaries from 1973 to 1978. Their estimates of the rise varied widely from 25 percent to 100 percent (Table 43.)

The staff study did not ask for predictions of future salary trends. Hall and Munneke in their article venture that "salaries will continue to rise slightly as inflation continues. However, there will be no dramatic upward shift such as there was from 1967 to 1977." They further predict that the gap between lowest and highest salaries will narrow.

Student Market for Legal Education

There are two aspects of need in relation to program development-- the interest of students in studying a given academic discipline or professional field, and the public demand for the product (graduates ready for employment).

Available evidence indicates the supply-demand factors regarding law school graduates in Texas are fairly well balanced. The question of student demand for legal education is very difficult to assess.

Applications for admission to law school remain high. Most prospective students apply to several law schools; therefore there are many duplications. The opinion of administrative personnel at several law schools is that numbers of applications have peaked and are leveling off.

Discussion of possible expansion of opportunities for legal education seems to focus chiefly on the potential part-time student who probably would attend classes in the late afternoon and evening. This type of student would likely not be included in most current statistics involving applicant pools.

Costs of Legal Education

The increasing cost of higher education is a familiar story, and legal education is no exception to the trend. Any possible concern for expansion of legal education makes the issue of cost an important one.

The four publicly supported law schools of Texas recently reported physical plant space totaling 810,000 square feet. Estimated replacement cost is \$48,600,000. Table 39 shows additions since 1973 and future plans. Using a hypothetical student body of 500, and the cost of facilities at the state's newest law school (Texas Tech), as bases upon which to project capital outlay for facilities, the Coordinating Board staff has estimated at least \$7,050,000 for a new law school building. Initial library acquisitions would cost from \$600,000 to \$700,000.

Ongoing operating expenses must be considered also. For the four publicly supported law schools the State of Texas in Fiscal 1972 spent \$2.6 million on annual instructional costs. In 1974 appropriations for instructional costs were \$4.4 million, and the amount projected for Fiscal 1979 is almost \$7.8 million--an increase of approximately 77 percent. (Table 44 gives a more detailed presentation of costs.) The Coordinating Board staff estimates annual instructional costs for a hypothetical new law school of 500 students to be \$1.9 million, and annual library upkeep, \$231,000.

Conclusions

1. Law school enrollments and graduates in Texas have increased steadily since 1973 [enrollments from 5,775 to 6,602 (est.); graduates from 1,520 to 1,962 (est.)].

2. The supply of lawyers in relation to population in Texas has significantly improved, and the state is now better supplied than the national average. (Texas, 472 citizens per lawyer; national, 497)

3. Applications for admission to law school remained high; law schools indicate that the number of applications may have peaked and begun to level off. The number of persons seeking entry to law school apparently still exceeds the places available within enrollments established within the law schools.

4. The existing law schools have capacity to enroll additional students within existing facilities and expansions underway.

5. Employment opportunities for new lawyers appear to be adequate in Texas if graduates are reasonably flexible in their requirements. Beginning salaries have risen notably.

6. Lawyers are increasingly concentrated in large cities.

7. The state has a large investment in legal education, and annual costs of offering such training have been rising. Appropriations for instructional costs for public law schools have increased by 130 percent in the past six years, from \$3,376,899 for fiscal year 1974, to \$7,773,013 in fiscal 1979.

8. Once a law school is established by the state enrollments and class sizes increase as determined by the institution.

TABLE 26

GRADUATES OF TEXAS MEDICAL SCHOOLS
1968-69 through 1977-78

	<u>1968-69</u>	<u>1972-73</u>	<u>1977-78</u>
Baylor	85	111	181
Texas A&M	-	-	-
TCOM	-	-	57
Texas Tech	-	-	-*
University of Texas			
Dallas	96	114	187
Galveston	138	165	203
Houston	-	-	69
San Antonio	-	101	118
Total	319	491	815

*Texas Tech had no graduates in 1977-78 due to the changeover from a 3-year to a 4-year curriculum.

TABLE 27

ENTERING CLASS SIZES OF TEXAS MEDICAL SCHOOLS
1968-69 through 1978-79

	<u>1968-69</u>	<u>1973-74</u>	<u>1978-79</u>
Baylor	84	168	168
Texas A&M	-	-	32
TCOM	-	54	83
Texas Tech	-	38	60
University of Texas			
Dallas	105	152	204
Galveston	163	205	203
Houston	-	48	150
San Antonio	56	122	203
Total	408	787	1,103

TABLE 28

PROJECTIONS OF GRADUATES OF TEXAS MEDICAL SCHOOLS

1978-79 through 1984-85

	<u>1978-79</u>	<u>1980-81</u>	<u>1982-83</u>	<u>1984-85</u>
Baylor	168	168	168	168
Texas A&M	-	32	32	64
TCOM	72	75	88	100
Texas Tech	40	40	80	120
University of Texas				
Dallas	202	205	208	208
Galveston	203	203	203	203
Houston	*	151	200	200
San Antonio	<u>128</u>	<u>137</u>	<u>200</u>	<u>200</u>
Totals	813	1,011	1,179	1,263

*No graduates in 1978-79 during transition from three- to four-year curriculum.

TABLE 29

PHYSICIANS LICENSED TO PRACTICE IN TEXAS

1968-1977

	<u>1968</u>	<u>1973</u>	<u>1977</u>
MD's Texas Schools	316	441	569
MD's Out-of-State Schools	350	685	798
DO's	47	41	97
Foreign Medical School Graduates	<u>148</u>	<u>282</u>	<u>977</u>
Totals	861	1,449	2,441

TABLE 30

ENTERING CLASS SIZES OF TEXAS DENTAL SCHOOLS

1968-69 through 1978-79

	<u>1968-69</u>	<u>1973-74</u>	<u>1978-79</u>
Baylor	100	130	140
University of Texas			
Houston	100	124	124
San Antonio	<u>-</u>	<u>32</u>	<u>152</u>
Totals	200	286	416

TABLE 31
NUMBER OF PROFESSIONAL NURSING PROGRAMS IN TEXAS

	1966-1978		
	<u>1966</u>	<u>1973</u>	<u>1978</u>
Baccalaureate	7	12	17
Associate	5	24	31
Diploma	<u>23</u>	<u>7</u>	<u>6</u>
Total	35	43	54

TABLE 32
ENROLLMENTS IN PROFESSIONAL NURSING PROGRAMS IN TEXAS

	1966-77		
	<u>1966</u>	<u>1973</u>	<u>1977</u>
Baccalaureate	1,472	6,947	9,365
Associate	306	3,645	4,499
Diploma	<u>1,413</u>	<u>987</u>	<u>1,044</u>
Total	3,191	11,579	14,908

TABLE 33
GRADUATES OF PROFESSIONAL NURSING PROGRAMS IN TEXAS

	1966-77		
	<u>1966</u>	<u>1973</u>	<u>1977</u>
Baccalaureate	240	738	1,802
Associate	40	1,006	1,658
Diploma	<u>434</u>	<u>412</u>	<u>306</u>
Total	714	2,156	3,766

TABLE 34
LAW SCHOOL ENROLLMENT HEADCOUNT - TEXAS
1968-69 - 1978-79

SCHOOL	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Texas Southern University	87	149	229	236	284	315	308	297	333	348	308
Texas Tech University	112	184	272	357	425	441	443	466	470	457	523
The University of Texas at Austin	1337	1455	1589	1652	1572	1618	1654	1701	1623	1578	1562est
University of Houston	426	485	756	820	799	696	841	899	1094	1164	1175est
TOTALS (Public)	1962	2273	2846	3065	3080	3070	3246	3363	3520	3547	3568est
Baylor University	274	295	325	371	377	369	366	397	410	395	385
St. Mary's University	382	420	462	532	595	605	590	669	695	698	687
Southern Methodist University	555	535	587	633	762	858	931	868	827	833	781
South Texas College of Law	555	577	717	756	803	825	885	938	996	1002	1155
TOTALS (Private)	1766	1827	2091	2292	2637	2657	2772	2872	2928	2978	3008
STATE TOTALS	3728	4100	4937	5357	5617	5727	6018	6235	6448	6475	6576est.

TABLE 35
FIRST-YEAR HEADCOUNT ENROLLMENTS
TEXAS LAW SCHOOLS 1968-69 - 1978-79

SCHOOL	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Texas Southern Univ.						122	114	90	147	140	140est
Texas Tech University	64	85	163	166	169	168	166	169	164	161	226
The University of Texas at Austin	440	618	572	471	531	642	557	571	536	529	553est
University of Houston	180	113	328	273	182	251	339	334	358	350	390
TOTALS (Public)	n/a	n/a	n/a	n/a	n/a	1183	1176	1164	1205	1180	1309est
Baylor University	141	135	154	170	145	154	164	174	163	162	173
St. Mary University	108	112	n/a	249	266	250	231	300	274	286	260
Southern Methodist University	163	174	179	224	286	283	319	222	223	239	235
South Texas College of Law	141	165	260	100	96	349	475	456	441	466	482
TOTALS (Private)	553	586	n/a	743	793	1036	1189	1152	1101	1153	1150
TOTALS STATE	n/a	n/a	n/a	n/a	n/a	2219	2562	2316	2306	2333	2459

TABLE 36

LAW SCHOOL GRADUATES - TEXAS

1968-69 - 1977-78

SCHOOL	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Texas Southern University	13	23	30	49	59	69	87	83	82	69
Texas Tech University		51	47	58	120	130	130	133	150	141
The Univ. of Tx. at Austin	454	381	378	582	599	461	485	564	549	511
University of Houston	85	132	84	100	93	201	127	237	362	365
TOTALS	552	587	539	789	871	861	829	1,017	1,143	1,086
Baylor University	97	94	115	129	140	145	133	140	161	156
St. Mary's University	87	74	98	97	156	219	183	196	205	212
Southern Methodist U.	179	158	192	165	154	229	280	278	324	257
South Texas College of Law	110	116	124	108	199	236	195	202	278	251
TOTALS	473	442	529	499	649	829	791	816	968	876
STATE TOTALS	1,025	1,029	1,068	1,288	1,520	1,690	1,620	1,833	2,111	1,962

TABLE 37

HEADCOUNT ENROLLMENT - BY ETHNICITY
AND SEX FROM SEVEN* TEXAS LAW SCHOOLS
1973-74 - 1978-79

	TOTAL HEADCOUNT	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
White		**					***
N		5161	5438	5708	5674	5621	4657
%			90.30%	90.10%	87.56%	86.38%	
Black							
N		49	262	263	319	378	264
%			4.35%	4.15%	4.92%	5.81%	
Hispanic							
N		170	304	320	426	462	413
%			5.05%	5.05%	6.57%	7.08%	
Asian or Pacific Islander							
N		26	15	27	35	29	22
%			0.25%	0.43%	0.54%	0.45%	
American Indian							
N		5	3	17	26	19	18
%			0.05%	0.27%	0.40%	0.29%	
Male							****
N		5028	5101	5115	4955	4996	
%		88%	85%	81%	77%	73%	
Female							
N		699	917	1220	1493	1733	
%		12%	16%	19%	23%	27%	

*Texas Tech University, The University of Texas at Austin, Baylor University, St. Mary's University, Southern Methodist University, South Texas College of Law and Texas Southern University

**Texas Southern University not available

***University of Houston not available

****Only six schools available 1978-79

TABLE 38
PROJECTED TOTAL ENROLLMENTS
TEXAS LAW SCHOOLS
1979-80 - 1983-84

SCHOOL	1979-80	1980-81	1981-82	1982-83	1983-84	Optimum with Present Facilities
Texas Southern Univeristy	350	360	350	350	350	450
Texas Tech Univeristy	590	550	650	650	650	650
The University of Texas at Austin	1,600	1,600	1,600	1,600	1,600	1,600
University of Houston	1,200	1,200	1,200	*	*	1,200
TOTALS	3,740	3,810	3,800	*	*	3,900
Baylor University	385-400	385-400	385-400	385-400	385-400	385
St. Mary's University	650	635	620	600	600	660
Southern Methodist Univ.	796	800	800	800	800	750-800**
South Texas College of Law	1,150	1,150	1,150	1,150	1,150	1,150
TOTALS	2981-2996	2970-2985	2955-2970	2935-2950	2935-2950	2945-2995
STATE TOTALS	6721-6736	6780-6795	6755-6770	*	*	6845-6895

*The University of Houston did not make projections beyond 1981-82 because the institution has tentative plans to expand facilities if student demand justifies such action, and also plans to add LL.M. programs. If neither of these developments occurs, the projection of 1,200 students is expected to remain constant.

**Southern Methodist University states that "facilities can be made available to handle a total of 1,500."

TABLE 39
ADDITIONS TO FACILITIES SINCE 1973
TEXAS LAW SCHOOLS

SCHOOL	Gross Square Feet Added Since 1973	COST	PROJECTED	COST
Texas Southern University	80,112	\$3,351,913	None	None
Texas Tech University	None	None	None	None
The University of Texas at Austin	None	None	216,00 sq.ft.	\$10,000,000
University of Houston	82,900	\$3,350,000	*	*
Baylor University	15,000	\$550,000	None	None
St. Mary's University	None	None	None	None
Southern Methodist University	None	None	None	None
South Texas College of Law	50,000est.	\$3,000,000	None	None

*The University of Houston states that the original design of facilities provided for 5 teaching units, each accommodating 500 students and about 25-30 faculty but "there is no firm commitment to increase the existing facilities."

TABLE 40

ADMISSIONS TO THE BAR

Texas And United States, 1968-1977

<u>Year</u>	<u>Texas</u> [*]	<u>U. S.</u> ^{**}
1968	1,009	17,764
1969	1,072	19,123
1970	1,005	17,922
1971	1,090	20,485
1972	1,437	25,036
1973	1,803	30,879
1974	1,824	30,707
1975	1,405	34,144
1976	1,911	36,271*
1977	2,058	36,093*

* Texas State Bar

** 1977 Review of Legal Education

* Does not include Florida admissions, which are not available.

TABLE 41
POPULATION/NUMBER OF LAWYERS PER COUNTY

<u>Size of Counties</u>	<u>Number of Counties</u>	<u>Low Population/Lawyer</u>	<u>Average Population/Lawyers</u>	<u>High Population/Lawyers</u>
0-9,999	101	333	1,064	*
10,000-19,999	66	719	1,098	2,286
20,000-29,999	24	440	1,050	1,643
30,000-39,999	20	702	1,042	1,625
40,000-49,999	5	680	909	1,381
50,000-59,999	5	745	1,039	2,108
60,000-69,999	3	307	602	4,931**
70,000-79,999	6	550	786	1,421
80,000-89,000	3	249	454	1,043
90,000-99,999	2	790	871	977
100,000-199,999	10	483	703	930
200,000-299,999	3	502	640	1,008
300,000-599,999	2	183	307	749
600,000-999,999	2	503	524	553
1,000,000-1,999,999	2	260	271	289

* No lawyers in county

** Randall County which includes part of Amarillo

TABLE 42
PERCENTAGE OF TOTAL STATE POPULATION AND PERCENTAGE
OF TOTAL NUMBER OF LAWYERS BY SIZE OF COUNTIES

<u>Size of Counties</u>	<u>Number of Counties</u>	<u>Percentage of State's Population</u>	<u>Percentage of State's Lawyers</u>
0-9,999	101	4.09%	1.81%
10,000-19,999	66	7.86%	3.38%
20,000-29,999	24	4.56%	2.05%
30,000-39,999	20	5.66%	2.56%
40,000-49,999	5	1.92%	0.99%
50,000-59,999	5	2.22%	1.01%
60,000-69,999	3	1.66%	1.30%
70,000-79,999	6	3.71%	2.23%
80,000-89,999	3	2.07%	2.15%
90,000-99,999	2	1.57%	0.85%
100,000-199,999	10	11.62%	7.79%
200,000-299,999	3	5.78%	4.26%
300,000-599,999	2	6.33%	9.70%
600,000-999,999	2	13.48%	12.12%
1,000,000-1,999,999	2	27.47%	47.80%

TABLE 43

STARTING SALARIES FOR LAW SCHOOL GRADUATES

<u>LAW SCHOOLS</u>	<u>STARTING SALARY RANGE</u>	<u>COMMENTS</u>	<u>COMPARISON WITH 1973</u>
Texas Southern University	\$14,000		\$9,000
Texas Tech University	\$12,000-\$18,000		\$8,000-\$14,000
The University of Texas at Austin	\$10,000-\$30,000	median \$16,500	\$11,000-\$18,000
University of Houston	\$13,500-\$27,000		
Baylor University	\$13,500-\$22,000		25% higher in 1978
St. Mary's University	\$8,000-\$22,000	median \$14,000 mean \$14,338	Doubled in 5 years
Southern Methodist University	\$12,500-\$20,000		\$10,000-\$17,000
South Texas College of Law	\$12,000-\$22,000	average \$15,000	Rise in proportion to other occupations requiring advanced study

TABLE 44

AMOUNTS PRODUCED BY MULTIPLYING BASE PERIOD SEMESTER CREDIT HOURS
FOR LAW TIMES APPROPRIATED RATES FOR CERTAIN ELEMENTS OF COST

PUBLIC LAW SCHOOLS

<u>Cost Element</u>	<u>Fiscal Year 1974</u>	<u>Fiscal Year 1975</u>	<u>Fiscal Year 1976</u>	<u>Fiscal Year 1977</u>	<u>Fiscal Year 1978</u>	<u>Fiscal Year 1979</u>
Faculty Salaries	\$2,647,219	\$2,827,508	\$3,459,515	\$3,694,865	\$4,811,165	\$4,974,706
DOE	218,894	218,894	290,481	320,565	898,452	914,806
Library	474,241	474,241	1,345,805	1,507,162	1,564,882	1,593,501
Other**	36,545	38,615	453,632	106,467	281,000	290,000
TOTALS	\$3,376,899	\$3,559,258	\$5,549,433	\$5,629,059	\$7,555,499	\$7,773,013

* Departmental Operating Expense

** "Other" includes special item for library, clinical program, capital outlay.

POSTSECONDARY EDUCATIONAL SUPPLY
AND OCCUPATIONAL DEMAND 1977 - 1983

The 1972 amendments to the federal Higher Education Act of 1965 authorized the establishment of new agencies or the designation of existing ones as state postsecondary planning commissions, labelled by Washington as "1202 Commissions." Their purpose was to improve comprehensive planning processes in postsecondary education. Federal funding became available for financing of such commissions in 1974. Governor Dolph Briscoe in 1976 designated the Coordinating Board, Texas College and University System, as the State Comprehensive Postsecondary Educational Planning Agency, or the 1202 Commission. At that time, the Governor instructed the Coordinating Board to publish annually information to assist students in making career choices.

The 1202 Commission was to identify fields in which the educational system is overproducing graduates in relation to job openings and fields that offer good employment opportunities. Working with the Texas Education Agency, the Coordinating Board was asked to provide this information to all high school and college counselors, school administrators and organizations and as many students and parents as possible. In response to those directives, the Coordinating Board published and distributed in March 1978 a report on Postsecondary Educational Supply and Occupational Demand in Texas, covering the period 1977 - 1983. This publication was a follow-up to the preliminary data issued in May 1977.

For each educational level the report provides information on those programs and occupations which are oversupplied, balanced or

undersupplied. The information contained in the report is not intended to restrict student choices as to the type of educational programs they want to undertake. Rather, it is intended to facilitate students in making informed career choices.

For example, students, teachers, parents, counselors and school administrators will have available to them a report which states that during the next five years the job market will be extremely competitive for foresters, interior designers, photographers, musicians, public administrators, commercial artists, editors, lawyers, reporters, elementary school teachers and secondary school teachers in several fields. On the other hand, they will be informed that opportunities are expected to be very good or excellent in accounting and financial fields; mechanical, construction and maintenance trades; secretarial work including legal and medical secretaries; nursing, medical technology and health care administration; printing and lithography; and secondary school teaching in industrial arts, mathematics and science, and bilingual education.

When comparing employment opportunities listed in the report for various educational programs it becomes obvious that many of the liberal arts programs are not vocationally oriented in the same sense as other areas of study. Consequently, if viewed solely from the aspect of preparation for specific careers, they are at a disadvantage. Nevertheless, these liberal arts programs serve as essential adjuncts to vocational training, and liberal arts graduates with requisite additional training can react to a wide range of employment opportunities. These include teaching, business management (trainee level),

administration, insurance, real estate and retail sales. In addition, some experts in manpower planning have found that the average American worker holds seven different jobs and three different careers during a working lifetime. There are indications that liberal arts majors and students in professional fields with strong liberal arts backgrounds can adapt more readily to opportunities available through career changes.

Supply and Demand Comparisons by Educational Level

Postsecondary educational supply was defined as the number of persons entering the Texas job market with a high school education plus some vocational training beyond high school or at least one year of college. Occupational demand was defined as the number of job openings by occupation.

Supply and demand were assessed on five levels of educational attainment. At each level, an average annual output by program of study was projected for the 1977 - 1983 period. The figures then were adjusted to compensate for individuals who were not expected to enter the job market for one of the following reasons: held the same job prior to completing the course of study, planning to continue education on a full-time basis or not seeking employment for some other reason. Table 45 provides an overview of the market-ready supply compared to the number of occupational openings on an average annual basis from 1977 to 1983. A description of the five educational attainment levels follows.

FIRST PROFESSIONAL DEGREES. Programs in dentistry, medicine, clergy,

law, veterinary science and optometry constitute the first professional degree attainment level. An average of 3,815 graduates annually is projected to enter the job market. After adjustment for in-migration, the average annual job openings number between 3,495 and 3,830. A comparison of supply to openings indicates a balanced condition overall. Fluctuations exist among program areas, however. Projected employment conditions in dentistry, medicine, optometry and veterinary science range from very good to excellent, that is, demand exceeds supply. The outlook for clergy is good or roughly balanced; law is competitive, meaning supply exceeds demand.

GRADUATE AND BACCALAUREATE DEGREES. The average number of graduates earning master's and doctoral degrees from Texas colleges and universities and entering the job market here is projected as 12,305 annually. After adjustment for in-migration, the number of openings expected to be filled by employees with graduate degrees ranges from 12,560 to 13,765, creating a roughly balanced situation.

A total of 39,340 baccalaureate degree recipients is projected to enter the job market annually. After adjustment for in-migration, occupational demand for workers with four years of college is expected to range from 35,090 to 38,460. The data therefore indicates a surplus of graduates relative to the number of job openings requiring a college degree. Jobs available at the baccalaureate level are primarily in professional, managerial, administrative and clerical occupations. Again, there is variation among fields, as would be expected. Opportunities in the health fields, engineering, business and computer science are very good at the baccalaureate level and very good to

excellent at the graduate level. The social sciences, fine arts, agriculture and many of the teacher education fields are rated as competitive in the job market, meaning graduates will exceed jobs available.

VOCATIONAL PROGRAM, ONE TO THREE YEARS OF COLLEGE. This category is comprised of individuals with at least one year of college but less than a baccalaureate degree. It includes: (1) graduates of vocational or associate level programs receiving degrees, certificates or diplomas; (2) students completing programs who do not receive certificates, degrees or diplomas but acquire marketable skills; and (3) non-returning students who have completed at least one year of college work.

A total of 41,085 individuals at this educational level is projected to enter the job market annually. After adjustment for in-migration, there are between 50,770 and 54,730 openings. Therefore, the demand for workers with one to three years of college work is characterized as very good. Job openings available to these individuals include positions in technical, clerical, crafts, sales and operative occupations.

VOCATIONAL PROGRAMS, HIGH SCHOOL GRADUATES WITH SOME ADDITIONAL VOCATIONAL TRAINING BELOW COLLEGE LEVEL. Individuals who comprise this category include students completing: (1) programs offered by proprietary schools; (2) training programs sponsored by the Comprehensive Educational and Training Act (CETA) which require less than one year of college; (3) programs offered by Job Corps Training Centers; (4) Joint Apprenticeship Training Programs; and (5) other allied health programs.

A total of 20,060 persons from those programs will be market-ready each year. After adjustment for in-migration, the supply in vocational/technical occupations ranges from 26,240 to 27,815 openings. Employment conditions for workers with a high school education and some additional vocational training appear to be very good for clerical, crafts, service and technical occupations.

Focus and Intent of Supply/Demand Report

The supply and demand report deals with occupational openings expected to be available to persons with postsecondary education or training. Projections for occupational openings which are likely to be filled by persons with secondary training has not been included. For the 1977-83 period an annual average of 309,200 job openings is forecast. To determine the number of openings anticipated at the postsecondary level, historical patterns based on Texas data from the U.S. Bureau of the Census and U.S. Bureau of Labor Statistics were examined and trends projected. On the basis of that information, 20 percent of all openings are expected to be filled by college graduates, 20 percent by individuals with from one to three years of college and 10 percent by high school graduates or the equivalent with additional vocational training below the college level. Therefore, only 50 percent of all available job openings have been considered in determining the demand for new employees with postsecondary educational training. The other 155,000 jobs will be filled by workers with secondary level training.

TABLE 45

**OVERALL COMPARISON, TEXAS
POSTSECONDARY EDUCATIONAL SUPPLY AND RELATED OCCUPATIONAL DEMAND**

AVERAGE ANNUAL MARKET READY SUPPLY (1977-1983)		AVERAGE ANNUAL OCCUPATIONAL OPENINGS * (1977-1983)	
COLLEGE GRADUATES	FIRST PROFESSIONAL DEGREES 3,815	FIRST PROFESSIONAL OPENINGS 3,495-3,830	
	MASTER'S AND DOCTORAL 12,305	GRADUATE DEGREE LEVEL OPENINGS 12,560-13,765	
	BACCALAUREATE 39,740	BACCALAUREATE DEGREE LEVEL OPENINGS 35,090-38,460	
PERSONS WITH 1 - 3 YEARS OF COLLEGE 41,095		1 - 3 YEARS OF COLLEGE LEVEL OPENINGS 50,770-54,730	
PERSONS WITH SOME POSTSECONDARY VOCATIONAL PREPARATION BELOW COLLEGE LEVEL 20,060		SOME POSTSECONDARY PREPARATION BELOW COLLEGE LEVEL OPENINGS 26,240-27,815	

* Adjusted for in-migration

EDUCATIONAL FACILITIES

One of the most visible changes in higher education in the past decade is the emergence of new university campuses and the extensive expansion of new facilities on existing campuses. Never in any decade in Texas history have so many new buildings been constructed for colleges and universities. The construction was in response to rapid growth in enrollments. As described in the section on enrollments, the pressure to continue the large construction program to accommodate new students has begun to ease off and will diminish further in the next decade. New construction should be considered on a more selective basis for the future, particularly in view of the increasing costs of maintenance, custodial care and utility costs for all facilities. Moreover, the continuing increase of indebtedness to the students and taxpayers should begin to slow unless clear need for additional facilities can be shown, and part of the demonstration of need should relate to how well existing space is being used throughout the days of the week.

Senior Colleges and Universities

Space and Students

Between 1968 and 1977, the amount of educational and general space on Texas' 28 public university campuses¹ rose from 14,867,676 square feet to 27,567,800 square feet, an increase of 85 percent. (See Table 46). This increase includes space at six public universities created since

¹The 28 schools do not include any upper-level centers located on junior college campuses.

1968. With the cutback in federal funding of higher education building projects, construction slowed during the last half of this period. From 1973 to 1977, institutions added almost 4.7 million square feet, a 20.5 percent increase. During the same period, full-time student equivalent enrollment increased only 13 percent.

Inevitably, the issue of how much space exists per student at an institution raises the question of how much each school should have ideally. This question cannot be answered simply. It is easier to state how not to answer it. Although the "average" square feet per student for a group of institutions is both simple to derive and convenient to use, it is inappropriate as a guide for the following reasons:

- (1) Averages rise as efforts are made to achieve them; thus, an average is constantly a rising figure, and a resulting indefinite growth in space per student is by no means a reasonable goal for Texas higher education.
- (2) An average applied across the board to all schools does not take into account differences among schools, programs or role and scope.
- (3) An average of space per student ignores how space is used at an institution.

The statewide average or mean space per student is effective only as a rough estimate for comparison with institutional facilities data and with corresponding averages of other states.

All institutions do not use their existing space with the same

efficiency. Even when a standard number of square feet per student is prescribed, institutions having less than the standard are found to use even that amount relatively inefficiently. Statistics for 27 of the 28 public senior institutions included in this study illustrate this point. The Coordinating Board maintains statistics on the total number of instructional rooms² assigned during a semester as well as the percentage of those rooms in use each hour.

AVERAGE PERCENTAGE OF INSTRUCTIONAL ROOMS USED (27 of 28 schools)

	Fall 1977				RANGE	
	8 a.m.- 9 p.m.	8 a.m.- 3 p.m.	4 p.m.- 9 p.m.	10 a.m.- 2 p.m.	(8 a.m.- 9 p.m.)	
					Low	High
Monday	32.9%	45.7%	15.3%	47.1%	17.7%	52.6%
Tuesday	30.3	40.7	16.7	45.1	14.6	44.0
Saturday	1.8 (8 a.m. - Noon)					

On the average, the Texas senior college campus is most heavily used from 10 a.m. through 2 p.m. Classrooms receive very little use after 4 p.m. Monday through Friday and almost none on Saturday. During the peak period from 10 a.m. through 2 p.m., less than half the available rooms are in use Monday through Friday. Conversely, during this peak period of room usage, slightly more than half of all available rooms are vacant.

²"Instructional Rooms" includes classrooms, class laboratories, and other rooms assigned for class meetings.

The range of percentages of available room use shown in Table 47 dramatically illustrates the wide disparity in facilities use efficiency during a fourteen-hour institutional day. Space use efficiency varies from a low of 14.6 percent to a high of 52.6 percent. The least efficient use of available instructional rooms by an institution leaves more than 85 percent of its rooms unoccupied throughout the day. A reasonable room use goal for all institutions is suggested by the current high percentage of 52.6 percent. This figure seems even more reasonable in view of the fact that all rooms are being heated or cooled, maintained and cleaned at substantial cost to the taxpayer. Also, at individual time periods throughout the week, over 70 percent of the available rooms on several of the 27 campuses studied were in use. The highest rate of room usage during a particular period was 91 percent.

Another approach to the assessment of facilities use efficiency is the analysis of average weekly room hours (WRH), the number of hours the average instructional room is used in a week. Coordinating Board Study Paper 12, Space Factors and Space Utilization Values For Use in Meeting the Facilities Needs of Texas Colleges and Universities, suggests WRH utilization standards of 30 hours for classrooms and 20 hours for class laboratories. The class laboratory figure is lower because these rooms are designed for specific programs and are unsuitable for general use.

The data presented is intended more as the first rather than the

last word on this important subject. A finer analysis of percentage of available rooms used, for instance, could be obtained by examining data separately for classrooms and class laboratories. Such a capability is being presently developed by the Coordinating Board staff. Another, as yet unexplored measure of facilities use efficiency is the proportion of student stations used; this could show how efficiently rooms of varying size are employed. All elements of Texas higher education will be involved in the critical task of developing methods for the accurate assessment and forecasting of space needs. Energy costs continue to rise. Schools must commit resources to removing architectural barriers to the handicapped and to the upgrading of existing space. Consequently the need for sound and deliberate facilities planning methods is ever more apparent. The unavoidable conclusion to be made from the present analysis, however, is that the demonstrated efficiency of the use of instructional rooms indicates the feasibility and the desirability of aiming for better use of existing facilities rather than the construction of new ones.

Community Junior Colleges

Texas public community-junior colleges added five new campuses for which data between 1969 and 1977 is available. (See Table 48). During that period, their total educational and general space increased by 4,137,362 square feet, or 85 percent. The total Full Time Student Equivalent enrollment increased by 47,356, or 65 percent. From 1973 to 1977, however, the increase in educational and general space was

1,177,263 square feet, 15 percent, and the Full Time Student Equivalent enrollment increase was 26,511, 28 percent. It is interesting to note not only the lower percentages of both enrollment and space growth for the last five years as compared with the entire 10-year period, but also a reversal in the relationship of these two growth curves. For the 10-year period (as well as for the first five years of that period), the rate of increase in square feet is higher than that for enrollment (i.e., facilities were not added in response to enrollment demand, but rather exceeded this demand). This was the pattern throughout the 10-year period for the public university sector. On the other hand, during the second five-year period, from 1973 - 1977, the relationship for junior colleges is reversed with the rate of enrollment increase exceeding the space increase 28 percent to 15 percent.

Several factors may have contributed to this trend in the junior colleges, among them spiraling energy and construction costs, the cut-back in federal support for higher education construction and the closer monitoring of expenditures by local taxpayers.

Private Colleges and Universities

The state's independent colleges and universities present a marked contrast to their public counterparts. The educational and general space at these institutions increased by 2,236,832 square feet, or 38 percent, between 1969 and 1977. (See Table 49). During this same period, enrollment increased by 8,502 Full Time Student Equivalents or 17 percent. From 1973 to 1977, however, the corresponding increases were

171,140 square feet (2 percent) and 3,012 Full Time Student Equivalents (5 percent). Drawing inferences from this data is difficult because a net difference of four more campuses are included in the 1977 figures than in those for either 1969 or 1973. If totals are excluded for these four campuses, both enrollment and facilities space show a decline from 1973-1977. Indeed, enrollments of several private senior colleges dropped between 1973 and 1977, as did their educational and general space. It is uncertain whether or not the latter decline indicates the active phasing out of space due to declining enrollments and operating cost pressures, but the obvious trend in the private sector is toward belt-tightening in the use of facilities. The reliance of independent institutions on private funding sources, especially since the withdrawal of federal participation in this area, is also a key factor.

Bonded Indebtedness

The debt of the public senior colleges and universities climbed in the past 10 years from less than \$500 million to almost \$1.2 billion. The debt in the public medical schools climbed from \$2 million to almost \$90 million. Indebtedness of the public junior college districts increased from \$130.2 million to almost \$300 million during the same period. The following figures indicate the dramatic growth in institutional debt patterns since 1968. (See Tables 50 and 51).

The total amount of additional indebtedness for facilities at public institutions of higher education approved by the Coordinating

Board since passage of Senate Bill 706 in 1975 stands at \$243,720,411.

While a portion of the public senior college and university indebtedness will be retired from the Permanent University Fund and the dedicated Ad Valorem Tax Fund, the major share is paid from state tax revenues and student income. Building construction also may be financed through revenue bonds, which involve the pledging of future student tuition income as well as income from student use fees and auxiliary enterprises such as cafeterias, dormitories and student unions.

Most institutions and agencies of the Texas A&M and University of Texas Systems share in the Permanent University Fund. Seventeen institutions participate in the Ad Valorem Tax Fund. Six academic institutions created after 1965, when current funding provisions were added to the Constitution, cannot share in either of these funds.

For many years, statutory provisions known as the Skiles Act have permitted a certain portion of tuition income to be set aside for new building construction. Income generated from this source and from ever-increasing building use fees, student use fees, and library use fees still was inadequate, however, to meet institutional needs and desires for more buildings. The Legislature, in 1971 and again in 1973, further authorized certain systems and institutions to pledge future tuition income for building programs. Authorization of the tuition revenue bond not only permitted the institutions statutory authority to issue up to \$242 million more in bonds for new buildings but also to

call upon the state for appropriations to retire bonded indebtedness.

With outstanding bonded indebtedness at all public senior colleges and public junior colleges now totalling over \$1.5 billion, the estimated annual debt service requirement is more than \$100 million.

Table 46
COMPARISON OF SPACE AVAILABLE, 1968, 1973 & 1977
PUBLIC UNIVERSITIES¹

Institution	Fall Educational & General Sq.Ft.			Fall Full Time Student Equivalent			Sq.Ft./Full Time Student Equiv. ²		
	1968	1973	1977	1968	1973	1977	1968	1973	1977
Angelo State University	245,757	329,523	351,809	2,687	3,620	4,360	94.8	91.0	80.7
East Texas State University	473,561	828,408	783,616*	8,140	7,450	6,797	58.2	111.2	115.3
Lamar University	458,128	600,421	842,873	8,707	8,999	8,854	52.6	66.7	95.2
Midwestern State University	216,119	374,560	407,587	2,876	2,917	3,308	75.1	128.4	123.2
North Texas State University	828,242	1,267,670	1,350,511	13,120	13,146	12,999	63.1	96.4	103.9
Pan American University	151,153	359,577	561,305	3,419	5,517	6,100	44.2	65.2	92.0
Prairie View A&M University	409,055	447,633	533,374	4,062	4,130	4,693	100.7	108.4	113.7
Sam Houston State University	499,701	744,701	818,831	7,223	9,109	9,319	69.2	81.8	87.9
Southwest Texas State University	414,967	759,559	735,348*	8,049	11,220	12,771	51.6	67.7	57.6
Stephen F. Austin State University	349,850	520,177	782,512	8,193	9,097	9,380	42.7	57.2	83.4
Sul Ross State University	175,678	275,163	299,494	2,128	2,146	1,482	82.6	182.2	202.1
Tarleton State University	252,902	329,398	446,152	2,475	2,718	2,800	102.2	121.2	159.3
Texas A&I University	408,780	670,429	695,477	5,605	6,069	5,160	72.9	110.5	134.8
Texas A&M University	2,303,082	3,608,989	2,797,599*	12,835	18,311	26,907	179.4	197.1	104.0
Texas Southern University	424,295	507,748	568,733	3,826	6,092	8,211	110.9	83.3	69.3
Texas Tech University	1,115,601	2,034,029	2,276,496	17,902	19,668	19,345	62.3	103.4	117.7
Texas Woman's University	457,473	702,220	721,859	4,817	5,322	6,322	95.0	131.9	114.2
The University of Texas at Arlington	729,307	1,030,103	1,219,059	10,044	12,038	13,210	72.6	85.6	92.3
The University of Texas at Austin	3,049,868	4,069,230	5,336,851	30,159	36,765	35,128	101.1	110.7	151.9
The University of Texas at El Paso	415,374	621,188	916,026	8,090	8,742	12,049	51.3	71.1	76.0
University of Houston	1,007,133	1,883,181	2,226,258	18,027	21,033	21,177	55.9	89.5	106.9
West Texas State University	472,650	809,205	1,076,842	5,971	5,299	5,208	79.2	152.7	206.8
Corpus Christi State University	-----	112,613	200,772	-----	580	1,328	-----	194.2	151.2
Texas Eastern University	-----	-----	111,772	-----	-----	1,050	-----	-----	106.5
University of Houston/Clear Lake	-----	-----	317,890	-----	-----	2,298	-----	-----	138.3
The University of Texas at Dallas	-----	-----	428,901	-----	-----	2,791	-----	-----	153.7
The University of Texas of P.B.	-----	-----	211,066	-----	-----	875	-----	-----	241.2
The University of Texas at S.A.	-----	-----	548,787	-----	-----	5,239	-----	-----	104.8
TOTALS:	14,867,676	22,885,725	27,567,800	188,355	219,988	249,161	78.9	104.0	110.6

¹No historic space data available for ETSU Texarkana Center, Lamar's Orange Center, Texas A&I Laredo Center, UT-Dallas, UT-Permian Basin, UT-San Antonio, Tyler State College.

²USOE national standard is 113 square feet per FTSE.

* "Decreases" in E&G sq.ft. from 1973-1977 are accounted for by extensive corrections to Facilities Inventory data resulting from thorough reevaluations of these institutions' inventories by their own staffs, monitored by the Coordinating Board staff.

Table 47

Average Percentages of Available Instructional Rooms Used During Selected
Periods of the Day at Texas Public Universities

INSTITUTION	MONDAY				TUESDAY				SATURDAY
	8 a.m.-9 p.m.	8 a.m.-3 p.m.	4 p.m.-9 p.m.	10 a.m.-2 p.m.	8 a.m.-9 p.m.	8 a.m.-3 p.m.	4 p.m.-9 p.m.	10 a.m.- 2 p.m.	8 a.m.- Noon
Angelo St. Univ.	35.5%	35.5%	9.2%	54.2%	23.5%	35.8%	7.2%	39.6%	1.0%
East Texas State Univ.	24.9%	38.1%	7.2%	44.0%	19.1%	27.6%	7.8%	27.4%	14.0%
Midwestern State Univ.	26.6%	40.3%	8.3%	40.2%	24.7%	34.8%	11.3%	40.0%	-0-
North Texas State Univ.	40.5%	60.5%	14.0%	65.0%	28.5%	40.6%	14.7%	46.2%	-0-
Pan American State Univ.	38.9%	51.4%	22.3%	55.2%	34.3%	42.9%	22.7%	46.8%	0.2%
Sam Houston State Univ.	28.0%	41.5%	10.0%	37.8%	29.5%	47.0%	6.3%	49.8%	0.6%
Southwest Texas State U.	36.2%	52.9%	12.3%	58.8%	39.1%	56.4%	16.2%	62.0%	0.6%
Stephen F. Austin State	29.8%	45.4%	9.0%	46.4%	24.1%	35.4%	9.3%	37.4%	-0-
Sul Ross State Univ.	17.7%	26.8%	5.7%	25.8%	14.6%	19.9%	8.2%	22.6%	-0-
Prairie View A & M	24.0%	35.0%	9.5%	35.4%	19.6%	29.9%	5.8%	31.4%	12.4%
Tarleton State Univ.	23.2%	33.8%	9.2%	33.8%	21.7%	30.5%	10.0%	34.4%	-0-
Texas A & I, Kings.	31.9%	46.9%	11.8%	47.8%	26.0%	36.6%	11.8%	39.8%	2.2%
Texas A & M Univ.	52.6%	78.5%	17.8%	77.4%	44.0%	62.3%	19.7%	70.4%	-0-
Texas Southern Univ.	27.9%	39.1%	13.0%	42.2%	29.6%	40.3%	15.5%	46.2%	15.8%
Texas Tech Univ.	29.6%	40.8%	14.7%	46.4%	27.7%	39.4%	12.2%	41.2%	-0-
Texas Woman's Univ.	32.0%	46.6%	12.5%	45.8%	28.7%	39.4%	14.5%	42.4%	1.4%
Univ. of Houston	37.8%	44.1%	29.3%	47.8%	39.0%	46.9%	28.5%	55.4%	2.2%
U.T. - Arlington	26.1%	34.6%	14.8%	36.4%	25.8%	34.0%	15.0%	38.6%	-0-
U.T. - Austin	39.1%	57.9%	14.0%	62.6%	39.2%	53.4%	20.3%	58.0%	-0-
U.T. - El Paso	34.4%	49.5%	17.2%	50.2%	33.1%	43.8%	18.8%	47.0%	-0-
West Texas State Univ.	23.7%	33.6%	10.3%	31.8%	20.4%	24.6%	14.3%	29.8%	0.4%
Corpus Christi State U.	29.5%	25.6%	32.2%	27.4%	43.3%	31.6%	58.8%	34.8%	-0-
Texas Eastern	25.9%	27.0%	24.5%	29.8%	29.1%	25.5%	33.8%	34.8%	1.6%
Univ. of Houston - C.L.C.	25.3%	16.3%	37.3%	17.2%	23.3%	12.3%	38.0%	14.0%	3.6%
U.T. - Dallas	18.3%	16.5%	20.7%	20.2%	16.0%	14.3%	22.0%	18.6%	1.8%
U.T. - Permian	27.5%	26.9%	28.3%	30.4%	27.3%	22.6%	33.5%	32.0%	-0-
U.T. - San Antonio	30.4%	35.4%	23.7%	38.2%	26.0%	28.8%	22.3%	37.0%	-0-
WEIGHTED AVERAGES:	32.9%	45.7%	15.3%	47.1%	30.3%	40.7%	16.7%	45.1%	1.8%

Table 48
COMPARISON OF SPACE AVAILABLE, 1969, 1973 & 1977

PUBLIC COMMUNITY COLLEGES¹

Institution	Fall Educational & General Sq.Ft.			Fall Full Time Student Equivalent			Sq.Ft./Full Time Student Equiv. ²		
	1969	1973	1977	1969	1973	1977	1969	1973	1977
Alvin Community College	61,906	70,954	177,625	875	1,125	1,680	70.7	63.1	105.7
Amarillo College	304,842	353,613	348,867	1,975	2,375	2,470	154.4	148.9	141.2
Angelina College	57,572	80,108	93,040	708	840	1,274	81.3	95.4	73.0
Bee County College	83,531	106,257	109,686	926	1,168	1,259	90.2	91.0	87.1
Blinn College	101,369	160,346	189,383	1,790	1,771	2,068	56.6	90.5	91.5
Brazosport College	29,100	121,769	127,591	608	1,177	1,915	47.9	103.5	66.6
Central Texas College	107,666	176,113	162,732	1,458	1,890	2,606	73.8	93.2	62.4
Cisco Junior College	71,308	121,711	134,468	953	735	978	74.8	165.6	137.4
Clarendon College	30,643	44,332	45,905	314	376	285	97.6	117.9	161.0
College of the Mainland	24,099	222,376	208,612	608	1,029	1,238	39.6	216.1	168.5
Cooke County Junior College	84,299	104,774	105,732	1,017	1,368	980	82.9	76.6	107.9
Dallas County Com.Col. Dist.(4 camp.)	118,328	697,357	723,388	4,781	14,158	18,398	24.7	49.3	39.3
Del Mar College	293,712	341,256	362,421	3,248	3,548	4,288	90.4	96.2	84.5
Frank Phillips College	68,030	79,427	80,131	493	402	403	138.0	197.6	198.8
Galveston College	20,120	62,299	47,241	746	1,104	1,105	27.0	56.4	42.7
Grayson County College	114,383	211,294	233,629	1,702	2,078	2,232	67.2	101.7	104.6
Henderson County Junior College	109,539	141,710	140,402	1,300	1,020	1,446	84.3	138.9	97.0
Hill Junior College	50,356	55,588	58,733	628	558	511	80.2	99.6	114.9
Howard College at Big Spring	89,998	131,804	131,804	825	760	685	109.1	173.4	192.4
Kilgore College	190,971	241,624	252,771	2,641	2,593	2,786	72.3	93.2	90.7
Laredo Junior College	158,405	250,560	202,679	1,138	1,722	2,217	139.2	145.5	91.4
Lee College	120,282	182,745	202,696	2,073	2,394	1,907	58.0	76.3	106.3
McLennan Community College	126,151	178,094	255,376	1,594	1,752	2,400	79.1	101.7	106.4
Navarro College	149,991	179,181	186,895	1,257	893	1,437	119.3	200.7	130.0
Odessa College	138,018	232,566	338,859	2,406	2,278	2,173	57.4	102.1	155.9
Panola Junior College	4,777	90,363	90,363	635	527	671	72.1	171.5	134.6
Paris Junior College	68,056	107,178	141,238	782	1,118	1,334	87.0	95.9	105.9
Ranger Junior College	45,951	68,644	41,676	527	520	588	87.2	132.0	70.8
San Antonio Jr. Col. Dist (2camp.)	366,470	500,554	568,371	10,268	13,508	18,042	35.7	37.1	31.5
San Jacinto College	246,803	356,557	518,100 (2)	4,689	4,526	6,580 (2)	52.6	78.8	113.9 (2)
South Plains College	200,928	230,664	231,841	1,569	1,474	1,299	128.1	156.5	178.4
Southwest Texas Junior College	90,503	121,881	122,262	1,081	1,170	1,442	83.7	104.2	84.8
Tarrant County Jr. Col. Dist. (2 camp.)	380,213	547,684	770,393 (3)	6,162	8,735	8,550 (3)	61.7	62.7	90.1 (3)
Temple Junior College	91,572	147,847	93,209	1,092	965	1,331	83.9	153.2	70.0
Texarkana College	101,479	196,864	197,515	1,538	1,558	1,988	66.0	126.4	99.3
Texas Southmost College	104,039	136,178	150,086	1,094	1,615	2,587	95.1	84.3	58.0
Tyler Junior College	151,915	179,405	218,082	3,512	3,721	4,616	43.3	48.2	47.2
Victoria College	69,535	92,764	126,701	1,361	1,317	1,427	51.1	70.4	88.8
Weatherford College	75,904	79,910	140,038	832	771	934	91.2	103.6	149.9
Wharton County Junior College	141,519	196,020	188,347	2,006	1,608	1,875	70.5	121.9	100.4
Midland College	----	58,048	110,414	----	632	1,275	----	91.8	86.6
Vernon Regional Junior College	----	66,989	66,580	----	430	567	----	155.8	117.4
Western Texas College	----	119,974	131,557	----	748	798	----	160.4	164.3
North Harris County College	----	----	90,702	----	----	1,970	----	----	46.0
Houston Community College	----	----	104,504	----	----	3,953	----	----	26.4
TOTALS:	4,885,283	7,845,382	9,022,645	73,212	94,057	120,568	66.7	83.4	74.8

¹No space and/or enrollment data available for Austin Community College, Cedar Valley Campus and North Lake Campus of D.C.C.D. and El Paso Community College for Fall, 1977.

²USDE national standard is 70 square feet per FTSE.

Table 49
COMPARISON OF SPACE AVAILABLE, 1969, 1973 & 1977

PRIVATE SENIOR COLLEGES AND UNIVERSITIES

Institution	Fall Educational & General Sq.Ft.			Fall Full Time Student Equivalent			Sq.Ft./Full Time Student Equiv.		
	1969 ¹	1973 ¹	1977 ¹	1969	1973	1977	1969	1973	1977
Abilene Christian College(2 camp.)	247,500	370,606	383,774	3,087	3,042	3,984	80.2	121.8	96.3
Austin College	162,069	184,112	184,129	1,209	1,253	1,255	134.1	146.9	146.7
Baylor University	670,723	800,458	796,538	5,502	7,644	8,476	121.9	104.7	94.0
Dallas Baptist College	57,977	119,362	125,623	1,280	1,148	825	45.3	104.0	152.3
East Texas Baptist College	66,455	85,654	90,976	709	646	733	93.7	132.6	124.1
Hardin-Simmons University	207,529	249,225	288,847	1,355	1,252	1,303	153.2	199.1	221.7
Howard Payne College	149,758	155,766	155,766	1,247	1,386	1,230	120.1	112.4	126.6
Houston Baptist College	83,041	87,891	87,891	952	754	1,097	87.2	116.6	80.1
Huston-Tillotson College	85,866	118,958	82,123	647	692	685	132.7	171.9	119.9
Incarnate Word College	140,380	172,664	174,130	1,020	1,163	1,127	137.6	148.5	154.5
Jarvis Christian College	60,941	96,817	84,658	243	665	615	250.8	145.6	137.7
LeTourneau College	148,731	198,519	186,058	737	693	898	201.8	286.5	207.2
Mary Hardin-Baylor College	113,760	136,004	136,004	684	709	886	166.3	191.8	153.5
McMurry College	143,287	211,458	213,526	1,414	1,023	881	101.3	206.7	242.4
Our Lady of the Lake College	170,188	190,258	190,675	1,501	1,380	1,042	113.4	137.9	183.0
Paul Quinn College	63,858	60,469	60,469	591	391	472	108.1	154.7	128.1
St. Edward's University	102,290	118,374	120,408	907	1,068	1,580	112.8	110.8	76.2
St. Mary's University	275,872	304,042	281,353	3,255	2,933	2,575	84.8	103.7	109.2
South Texas College of Law	18,327	29,873	31,117	578	768	899	31.7	38.9	38.5
Southern Methodist University	664,769	1,121,304	936,473	7,010	8,418	7,047	94.8	133.2	133.0
Southwestern Adventist College	62,321	94,846	93,464	416	1,055	676	149.8	89.9	138.2
Southwestern University	243,599	150,271	190,551	809	864	947	301.1	173.9	201.2
Texas Christian University	350,115	689,075	637,179	5,645	5,336	4,853	62.0	129.1	131.3
Texas College	76,852	80,094	79,729	422	550	567	182.1	145.6	140.6
Texas Lutheran College	99,771	149,297	171,388	782	967	990	127.6	154.4	173.1
Texas Wesleyan College	116,927	174,967	169,219	1,453	1,325	1,202	80.5	132.1	140.7
Trinity University	354,043	609,735	511,348	2,334	2,971	2,941	151.7	205.2	174.0
University of Dallas	104,195	122,765	122,765	1,069	1,235	1,332	97.5	99.4	92.1
University of St. Thomas	73,613	122,666	126,280	1,077	1,422	1,326	68.4	86.3	95.2
Wayland Baptist College	90,027	172,111	172,111	533	722	831	168.9	238.4	207.1
William Marsh Rice University	678,296	771,101	771,930	2,959	3,433	3,448	229.2	224.6	223.8

Table 49 (continued)

COMPARISON OF SPACE AVAILABLE, 1969, 1973 & 1977PRIVATE SENIOR COLLEGE AND UNIVERSITIES

<u>Institution</u>	<u>Fall Educational & General Sq.Ft.</u>			<u>Fall Full Time Student Equivalent</u>			<u>Sq.Ft./Full Time Student Equiv.¹</u>		
	<u>1969</u>	<u>1973</u>	<u>1977</u>	<u>1969</u>	<u>1973</u>	<u>1977</u>	<u>1969</u>	<u>1973</u>	<u>1977</u>
American Technological University	----	----	32,226	----	----	377	----	----	85.5
Bishop College	----	----	169,470	----	----	1,334	----	----	127.0
Lubbock Christian College	----	----	157,368	----	----	997	----	----	157.8
Wiley College	----	----	104,346	----	----	588	----	----	177.4
TOTALS:	5,883,080	7,948,772	8,119,912	51,427	56,908	59,929	114.4	139.7	135.5

¹USOE Standard: 126.5 sq.ft. per FTSE.

Table 30
OUTSTANDING BONDED INDEBTEDNESS

Texas Public Senior College and Universities

Institution	August 31, 1978			
	Ad Valorem Bonds	Permanent University Fund Bonds	Other Revenue Bonds	Institutional Totals
Angelo State University	None		\$14,935,000	\$14,935,000
East Texas State University	Outstanding		18,612,000	18,612,000
Lamar University	as of		25,070,000	25,070,000
Midwestern State University	8/31/78**		6,760,000	6,760,000
North Texas State University			44,779,000	44,779,000
Pan American University			19,250,000	19,250,000
Sam Houston State University			15,329,000	15,329,000
Southwest Texas State Univ.			25,510,000	25,510,000
Stephen F. Austin State Univ.			28,758,000	28,758,000
Sul Ross State University			3,298,000	3,298,000
Texas A&I University System				
Texas A&I Univ. at Kingsville			11,449,000	11,449,000
Corpus Christi State University			1,000,000	1,000,000
Texas A&M University System		65,355,000	-0-	65,355,000
Prairie View A&M University			21,223,000	21,223,000
Tarleton State University			6,844,000	6,844,000
Texas A&M University			87,422,000	87,422,000
Texas Southern University			18,512,000	18,512,000
Texas Tech University			75,075,000	75,075,000
Texas Woman's University			22,766,000	22,766,000
The University of Texas System		131,080,000	142,440,000*	273,520,000
The Univ. of Tex. at Arlington			29,135,775	29,135,775
The Univ. of Tex. at Austin			184,231,000	184,231,000
The Univ. of Tex. at El Paso			27,570,000	27,570,000
The Univ. of Tex. at Dallas			See UT System	*
The Univ. of Tex. at Permian Basin			600,000	600,000
The Univ. of Tex. at San Antonio			See UT System	*
Texas Eastern University			1,750,000	1,750,000
University of Houston			129,962,000	129,962,000
West Texas State University			16,312,000	16,312,000
<u>Subtotal, Public Senior</u>	-0-	196,435,000	978,592,775	1,175,027,775
MEDICAL SCHOOLS:				
Texas Tech School of Medicine			30,205,000	30,205,000
The University of Texas Medical Branch at Galveston			35,345,000	35,345,000
The Univ. of Texas Cancer Center			23,270,000	23,270,000
<u>Subtotal, Medical Schools</u>	-0-	-0-	88,820,000	88,820,000
<u>GRAND TOTALS:</u>	-0-	196,435,000	1,067,412,775	1,263,847,775

*Revenue Bonds for U.T. Dallas, Permian Basin and San Antonio are carried as U.T. System Revenue Bonds.

**While no Ad Valorem Bonds are outstanding as of this date, potentially almost 1 Billion could be sold in the very near future.

Table 51

BONDED INDEBTEDNESS AT PUBLIC JUNIOR INSTITUTIONS
as of August 31, 1978

<u>Institution</u>	<u>General Obligation</u>	<u>Revenue</u>	<u>Total</u>
Alvin Junior College	\$ 7,690,000	\$ -0-	\$ 7,690,000
Amarillo College	3,830,000	-0-	3,830,000
Angelina College	1,580,000	2,010,000	3,590,000
Austin Community College	-0-	-0-	-0-
Bee County College	1,985,000	1,555,000	3,540,000
Blinn College	780,000	2,782,000	3,562,000
Brazosport College	2,160,000	2,465,000	4,625,000
Central Texas College	1,630,000	6,609,000	8,239,000
Cisco Junior College	81,000	875,000	956,000
Clarendon College	140,000	995,000	1,135,000
College of the Mainland	6,600,000	48,000	6,648,000
Cooke County College	135,000	502,000	637,000
Dallas County Community Col. Dist.	86,200,000	5,000,000	91,200,000
Del Mar College	1,015,000	1,135,000	2,150,000
El Paso Community College	18,650,000	-0-	18,650,000
Frank Phillips College	265,000	654,000	919,000
Galveston College	-0-	267,000	267,000
Grayson County College	2,075,000	905,000	2,980,000
Henderson County Junior College	638,000	1,485,000	2,123,000
Hill Junior College	281,000	350,000	631,000
Houston Community College	-0-	-0-	-0-
Howard College at Big Spring	1,997,500	395,000	2,392,500
Kilgore College	670,000	970,000	1,640,000
Laredo Junior College	1,405,000	3,302,000	4,707,000
Lee College	1,085,000	190,000	1,275,000
McLennan Community College	4,955,000	2,285,000	7,240,000
Midland College	10,630,000	823,000	11,453,000
Navarro College	660,000	960,000	1,620,000
North Harris County College	11,395,000	-0-	11,395,000
Odessa College	5,565,000	1,405,000	6,970,000
Panola Junior College	320,000	420,000	740,000
Paris Junior College	2,675,000	1,743,000	4,418,000
Ranger Junior College	228,000	283,000	511,000
San Antonio Junior Col. Dist.	865,000	5,760,000	6,625,000
San Jacinto College	15,684,000	989,000	16,673,000
South Plains College	1,685,000	1,245,000	2,930,000
Southwest Texas Junior College	220,000	988,000	1,208,000
Tarrant County Junior Col. Dist.	27,300,000	-0-	27,300,000
Temple Junior College	1,585,000	1,165,000	2,750,000
Texarkana Community College	455,000	266,636	721,636
Texas Southmost College	-0-	1,775,000	1,775,000
Tyler Junior College	659,000	218,000	877,000
Vernon Regional Junior College	1,190,000	280,000	1,470,000
Victoria College	2,700,000	590,000	3,290,000
Weatherford College	425,000	1,349,000	1,774,000
Western Texas College	4,175,000	1,055,000	5,230,000
Wharton County Junior College	106,000	1,265,000	1,371,000
GRAND TOTALS:	234,369,500	57,358,636	291,728,136

PUBLIC HIGHER EDUCATION FINANCE

Higher Education Appropriations

Appropriations to all agencies of higher education have increased substantially since the 1968-69 biennium. The 1968-69 biennial appropriation totaled \$676,339,872, and the 1978-79 biennial appropriation is \$2,890,154,615, a 327 percent increase for the six bienniums.

TABLE 52

LEGISLATIVE APPROPRIATIONS FOR ALL AGENCIES OF HIGHER EDUCATION

ALL FUNDS

<u>Biennium</u>	<u>Appropriation</u>	<u>Biennial Percent Increase</u>
1968-69	\$ 676,339,872	---
1970-71	898,549,756	32.9%
1972-73	1,134,650,346	26.3
1974-75	1,505,732,238	32.7
1976-77	2,278,173,755	51.3
1978-79	2,890,154,615	26.9

The biennial appropriations to all agencies of higher education (public senior colleges, community colleges, health related institutions, and all other, including the Coordinating Board) have increased by over \$2.2 billion since the 1968-69 biennium. There are several important reasons for the growth in funding. The number of public senior institutions, including branches, rose from 22 to 36. The number of community college districts grew from 40 to 47. The number of health science centers and

medical schools has increased from three to nine, including Baylor College of Medicine and Baylor College of Dentistry. (These two institutions receive state support in the form of trustee funds to help increase the supply of physicians and dentists in Texas.) Total enrollment in all public institutions of higher education rose from 275,607 in fall 1967 to 647,933 in fall 1977. Inflation also can be held accountable for part of the increase in appropriations to higher education.

State Appropriations

The percentage for higher education appropriations to total state appropriations has changed since the 1968-69 biennium.

TABLE 53

HIGHER EDUCATION PERCENTAGE OF TOTAL STATE APPROPRIATIONS

ALL FUNDS

<u>Biennium</u>	<u>Total State Appropriation</u>	<u>Higher Education Appropriation</u>	<u>Percent of Total State Appropriation</u>
1968-69	\$ 4,936,318,757	\$ 676,339,872	13.7%
1970-71	5,868,535,100	898,549,756	15.3
1972-73	8,076,821,939	1,134,650,346	14.0
1974-75	9,703,011,877	1,505,732,238	15.5
1976-77	12,093,684,448	2,278,173,755	18.8
1978-79	15,544,492,472	2,890,154,615	18.6

Total state appropriations increased by 215 percent from the 1968-69 biennium through the 1978-79 biennium. Higher education appropriations

for the same period increased by 327 percent. A substantial portion of the increases went into the construction of new institutions. The sectors with the greatest percentage increases were the health related schools and the community-junior colleges.

Nationally, Texas ranks number two in the amount of appropriations to public higher education, the number of public institutions of higher education and student enrollment in public education, and third in state population.

TABLE 54

COMPARISON OF LEGISLATIVE APPROPRIATIONS FOR
THE 1968-69 BIENNIUM WITH THE 1978-79 BIENNIUM

ALL FUNDS
All Agencies of Higher Education

Biennium	Public Senior Universities	Public Community Colleges ¹	Health Related Agencies ²	All Other	Biennial Total
1968-69	\$ 403,832,265	\$ 62,035,150	\$ 97,069,797	\$115,402,660	\$ 676,339,872
% of Total	59.7	9.2	14.3	16.8	100.0
1978-79	1,373,206,492	426,214,135	720,921,519	369,812,469	2,890,154,615
% of Total	47.5	14.7	25.0	12.8	100.0
Percentage Increase	240%	587%	643%	226%	327%

¹Includes funds appropriated to Texas Education Agency for community college vocational-technical programs.

²Includes funds appropriated to Coordinating Board for health science purposes.

Growth of appropriations to higher education varies by classification of appropriation. Four funding categories exist for appropriation

purposes,

(1) Public senior universities: Includes all state-supported four-year senior universities, upper-level universities, centers and extension units operating under Coordinating Board formulas.

(2) Public community colleges: Includes the 47 community college districts with 59 campuses, which receive state aid on a formula basis to support instructional and administrative programs. Funding for vocational-technical programs is recommended by the Texas Education Agency. Costs for construction, operation and maintenance of physical plants, and the community college campuses are met through local funds.

(3) Health related agencies: Includes all public medical, dental and health science centers. Also in this funding classification are appropriations to the Coordinating Board for health science related activities.

(4) All other: Includes Texas State Technical Institute, museums, research and services of the Texas A&M University Agricultural Experiment Stations and extension resources, Moody College, system offices and the Coordinating Board.

Projecting Needs of Higher Education

Projecting the funding of higher education through three bienniums is difficult in a period of high inflation, increases in enrollment, threatened cutbacks in federal funds and pressures for tax relief. However, it is important to view the future.

The current rate of inflation is approximately 8 percent, and the national unemployment rate is approximately 6 percent. These rates may

vary from state to state. The statewide unemployment in Texas is slightly lower than the national average, although certain geographic areas have unemployment rates doubling the national average.

Recent projections indicate that enrollments in public institutions of higher education will continue to increase. The rate of growth will be less than that of the early 1970s, but by 1985 a 13.4 percent increase in enrollments in the public university sector is likely.

Changing patterns in federal funding also are affecting public higher education. More emphasis now is being placed on providing funds directly to students rather than broad category program funding to the universities.

Because of the unstable economic conditions, a high and low projection of state appropriations to public higher education was developed. (See Tables 55 and 56)

Both projections use as a base the actual appropriations from all funds to higher education for the 1978-79 biennium and the same pattern of allocation of funds among the four appropriation classifications for all agencies of public higher education.

The projections are based on the following assumptions: (1) the number of public institutions of higher education will not change; (2) enrollments will increase at the projected rates; (3) tuition and required fee levels will not change substantially; (4) state revenue will continue to increase at approximately the same rate; and (5) a substantial increase in funding may occur in the 1978-79 biennium to offset increased costs for energy and other goods and services required for institutional operation.

The high projection assumes a 32 percent increase in higher education appropriations for the 1980-81 biennium, a 23 percent increase for the 1982-83 biennium and a 25 percent increase for the 1984-85 biennium. This projection shows an increase of \$2.9 billion, or 103 percent, from the 1978-79 biennium through the 1984-85 biennium in total state appropriations. Of the increase, \$1.4 billion is for senior universities, \$453 million for community colleges, \$745 million for health related agencies and \$334 million for all other agencies of higher education.

TABLE 55

HIGH PROJECTION

PROJECTED APPROPRIATIONS FOR 1984-85 BIENNIUM
Compared With
LEGISLATIVE APPROPRIATIONS FOR 1978-79 BIENNIUM

ALL FUNDS
All Agencies of Higher Education

Biennium	Public Senior Universities	Public Community Colleges	Health Related Agency	All Other	Biennial Total
1978-79	\$1,373,206,492	\$426,214,135	\$ 720,92 ,	\$369,812,469	\$2,890,154,615
1984-85	2,814,833,000	879,650,000	1,466,08 ,000	703,720,000	5,864,288,000
Percentage Increase	105%	106%	103%	90%	103%

The low projection of legislative appropriations for the 1984-85 biennium assumes a 31 percent increase in appropriations for the 1980-81 biennium and a biennial increase of approximately 22 percent through 1984-85. The resulting 95 percent increase in state appropriations from 1978-79 through the 1984-85 biennium would increase total state appropriations to higher education by approximately \$2.7 billion dollars. Within

the projected total appropriations, senior university funding for the 1984-85 biennium would increase by \$1.3 billion, community college appropriations by \$419 million, health related agencies by \$688 million and all other agencies of higher education by \$306 million.

TABLE 56

LOW PROJECTIONS

PROJECTED APPROPRIATIONS FOR 1984-85 BIENNIUM
Compared With
LEGISLATIVE APPROPRIATIONS FOR 1978-79 BIENNIUM

ALL FUNDS
All Agencies of Higher Education

Biennium	Public Senior Universities	Public Community Colleges	Health Related Agencies	All Other	Biennial Total
1978-79	\$1,373,206,492	\$426,214,135	\$ 720,921,519	\$369,812,469	\$2,890,154,615
1984-85	2,704,227,000	845,073,000	1,408,452,000	676,056,000	5,633,808,000
Percentage Increase	97%	98%	95%	83%	95%

The percentage increase for both the high and low projections is less than the percentage increase in appropriations to higher education since the 1972-73 biennium. With 1972-73 as the base biennium, state appropriations to higher education through the 1978-79 biennium have increased by approximately 155 percent. Both projections reflect a rate of growth for the next biennium of less than one-third the growth rate of 327 percent for the past decade.

Appropriations to Public Senior Universities

The funding system for public senior universities consists of two parts: appropriations generated by formulas and appropriations generated by non-formula elements of cost. The 11 formula areas are general administration and student services, general institutional expense, faculty salaries, departmental operating expense, library, instructional administration, organized research, physical plant general services, custodial / services, grounds maintenance and building maintenance. The eight non-formula elements of costs are for vocational teacher training, organized activities, campus security, utilities, extension and public service, major repairs and rehabilitation, special items and staff benefits.

Total appropriations to public senior universities increased 240 percent or \$969 million from the 1968-69 biennium through the 1978-79 biennium. Formula appropriations increased 203 percent, or \$747 million. Non-formula appropriations for the same period rose 523 percent or \$242 million.

In the 1968-69 biennium, formula appropriations constituted 88.5 percent of the total appropriations for public senior universities. A decade later formula appropriations decreased to approximately 79 percent of the appropriations to public senior universities.

Several factors contributed to the significant increase in non-formula funding. Utilities appropriations in the 1968-69 biennium were \$15,274,633 or 32.9 percent of the non-formula appropriation. The 1978-79 utilities appropriation is \$152,132,801 or 52.7 percent of the non-formula appropriation. This is an 896 percent increase since 1968-69. Utilities appropriations for the 1974-75 biennium totaled \$43,173,282. A comparison of

utilities appropriations from 1974-75 to 1978-79 yields a 252 percent increase in appropriations.

Funding for major repair and rehabilitation of facilities also affected the increase in non-formula appropriations. The 1968-69 biennial appropriation in that area was \$6,659,644. In the 1978-79 biennium the appropriation is \$39,950,084, a 499 percent increase. For the 1974-75 biennium \$10,966,758 was appropriated.

Special item appropriations have increased by 385 percent since the 1968-69 biennium. In 1968-69 the appropriation was \$11,620,824. For 1978-79 the appropriation is \$56,379,759. In the 1974-75 biennium the appropriation was \$27,443,187.

Appropriations for utilities, major repair and rehabilitation and special items has had a significant effect on university funding. In 1968-69 the appropriation for these items was equal to 72 percent of all the non-formula appropriations. In the 1978-79 biennium the appropriation is equal to 86 percent of non-formula appropriations. Of the total appropriations to the public senior universities, utilities, major repair and rehabilitation and special items were 8.3 percent of the total appropriations in 1968-69. They now comprise 18 percent of the total appropriations for the 1978-79 biennium.

TABLE 57

FORMULA AND NON-FORMULA APPROPRIATIONS
TO PUBLIC SENIOR UNIVERSITIES
AND PERCENT INCREASE

<u>Biennium</u>	<u>Formula Appropriation</u>	<u>Percent</u>	<u>Non-Formula Appropriation</u>	<u>Percent</u>	<u>Total</u>
1968-69	\$ 37,438,276	89%	\$ 46,393,989	11%	\$ 403,832,265
1974-75	593,244,212	81	139,973,078	19	733,217,290
% Increase over 1968-69	66%		202%		82%
1978-79	1,084,504,032	79	288,702,460	21	1,373,206,492
% Increase over 1974-75	83%		106%		87%
Percent Increase 1978-79 over 1968-69	203%		522%		240%

Public Community College Funding

State aid to public community colleges is based on administrative and instructional program operation, with the campus facilities and maintenance and operation supported from local revenues. Table 58 shows the dollar amounts and percentages for local revenues, on a statewide basis, including the community college expenditures for operational purposes.

State aid to public community colleges is based on the following elements of cost: General administration and student services, general institutional expense, faculty salaries, departmental operating expense, library, instructional administration, organized activities and staff benefits. The Coordinating Board recommends funding for the general academic programs and the Texas Education Agency recommends funding for the vocational-technical program area.

TABLE 58

INCOME SUMMARY FOR TEXAS PUBLIC COMMUNITY
COLLEGE DISTRICTS

Source of Income	Fiscal Year 1969		Fiscal Year 1973		Fiscal Year 1977	
	Amount	Percent	Amount	Percent	Amount	Percent
State and Federal	\$ 36,028,616	53.3%	\$ 83,389,072	60.7%	\$192,518,461	67.4%
Local	31,568,836	46.7	54,055,637	39.3	93,045,623	32.6
Total	\$ 67,597,452	100.0%	\$137,444,709	100.0%	\$285,564,084	100.0%

From fiscal 1969 through fiscal 1977 state and federal income for the community college districts on a statewide basis has increased 434 percent or \$156,489,845. Local income, which includes tuition and local tax revenues, increased by 194 percent or \$61,476,787. The increase in total sources of revenue for community college operation was 322 percent or \$217,966,632.

Several community college districts appear to be having financial difficulties as population loss and devaluation of property affect local tax bases. Some districts also are facing rising costs of operation as enrollments stabilize or decline.

Formula Studies

For two decades Texas has used a system of formulas to provide state support to public senior universities and public community college districts.

Texas law directs the Coordinating Board to "...devise, establish, and periodically review and revise formulas for the use of the Governor and the Legislative Budget Board in making appropriations recommendations to the legislature." The purpose of the formula system is also described, "To finance a system of higher education and to secure an equitable distribution of state funds deemed to be available for higher education."

The formula system has evolved through institutional and Coordinating Board study committees. Formulas are reviewed and revised by study committees after each regular session of the Legislature, and new formulas are recommended, as needed, for Board consideration. Periodically the total formula system is reviewed by outside consultants to determine its adequacy to allocate funds equitably to the institutions of higher education. Dr. Ralph Steen, retired president of Stephen F. Austin State University, is the independent consultant directing the study of public senior university formulas to assess their adequacy as a basis to determine the financing of higher education in the 1980s. The thrust of the study will be to simplify certain formulas such as instructional administration and organized research and to analyze and develop recommendations for revision and modification of certain high support formulas in general administration and student services, faculty salaries and departmental operating expense. New formulas may be recommended for certain non-formula areas. The formula restudy recommendations will be completed in spring 1979. The study will be reviewed by other outside consultants before presentation to the Coordinating Board.